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PRAISE! Promotion Recognition Advocacy In Stroke Education

A Faith-Based Asset Approach to Cardiovascular Health Promoting Activities

Within the African American Community

Capstone Scholarly Project Presented By:

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### Abstract

**Background:** The need to increase stroke awareness, advocacy and cardiovascular health promoting activities in the African American population is challenging, but it is a vital challenge that is essential in decreasing mortality, morbidity and inequalities in stroke. African Americans suffer from higher stroke morbidity and mortality, due to the fact they are less likely to seek emergency care and be aware of stroke signs and symptoms. **Objective:** The PRAISE (Promotion Recognition Advocacy in Stroke Education) program was designed to increase stroke awareness, management skills and decrease stroke related risk via a faith-based asset approach. **Methods:** The project was a collaborative effort that included the church and a community based organization. The program included 12 training sessions where participants were educated on stroke, nutrition, advocacy and empowerment, physical fitness and utilizing available resources within the community and the church to improve health. Participants were provided with active learning opportunities through sharing, photo voice, physical training and cooking demonstration. **Results:** Individual knowledge gains one-week post program completion included stroke symptom recognition, knowing to call 911 for stroke symptoms, knowledge of where in the body stroke occurs and warning signs of stroke. Paired *t* tests demonstrated a 10.87% difference ( $P < 0.001$ ) between pretest and posttest scores. As a result of the program, 33% made a lifestyle change, and 49% saw a doctor. An increased in mean knowledge for the pre-test for all participants was statistically significant difference with a value of  $< 0.05$ . **Conclusion:** PRAISE provided stroke education and a platform for advocacy and access to resources that enable the individual and the community in making healthier options.

**Keywords:** PRAISE; stroke; faith-based; asset approach; community based organization,

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### Promotion Recognition Advocacy In Stroke Education (PRAISE)

#### A Faith-Based African American Stroke Health Promoting Activities Program

Globally, stroke is the second leading cause of all deaths; with an incidence rate of 16 million of first ever stroke and 5.7 million in total deaths annually. Stroke is fourth among all deaths in the United States and leads in severe chronic morbidity with an expected increase from 3.2% in 2012 to 3.9% by 2030 (Ovbiagele et al., 2013; Perk et al., 2012). Annually, 795,000 individuals will suffer a new or repeated stroke and 77% percent of those accounts for first time stroke in the United States (Roger et al., 2011). Data from the 2008 National Center for Health Statistics and National Health and Nutrition Examination Survey (NCHS/NHANES) estimated a prevalence rate of seven million Americans 20 years or older have had a stroke. Direct expenditure on non-nursing home stroke care comprise greater than 10.7% of the Medicare budget, and greater than 1.7% of the overall national health expenditures (Ovbiagele, et al., 2013). In a critical review of the literature on the cost of stroke, Luengo-Fernandez, Gray, and Rothwell (2009) reported on average, a single stroke costs \$19, 018 with 65% percent of the overall cost associated with primary hospitalization. The United States expenditure on stroke for 2008 was an estimated \$18.8 billion in stroke care plus more than \$15 billion as a result of lost productivity and death (Morbidity and Mortality Weekly Report, 2012). Indirect costs associated with premature death and lost productivity for stroke survivors are larger than all the direct costs combined (Ovbiagele, et al., 2013).

The Southwestern United States, including California, bears a disproportionate burden of disease. In California the leading causes of death are cardiovascular disease and stroke, with an estimation of 35% percent of the total death (Reynen, Kamigaki, Pheatt, & Chaput, 2007, 2011). In Riverside, California, the non-profit community-based organizations and the faith-based

health organizations, which are considered church groups and church health ministries have sought common missions to try to address this growing epidemic of stroke (Riverside County Department of Health, 2013; San Bernardino County Department of Health, 2013; Clark, 2014). Recently, a very noticeable example of the collaboration of community-based and the faith-based organization has been the formation of Health Ministry Alliance (HMA), a faith-based community health outreach program of more than seven churches, and Healthy Heritage Movement (HHM), a non-profit health education, health promoting and advocacy organization (Clark, 2014).

### **Background**

The need to increase stroke awareness, advocacy, and cardiovascular health promoting activities in the African American population is challenging, but it is a vital challenge that is essential in decreasing mortality, morbidity and inequalities in stroke. Stroke is a major cause of mortality among patients, particularly among the African American community (Donnan, Fisher, Macleod, & Davis, 2008). Survivors often experience disability or impairments (Go et al., 2013). Subsequently, the cost of stroke to the United States as a result of stroke-related inequities and disparities are astronomical, totaling \$6.4 billion annually (Wyatt, 2012). This substantial economic burden is expected to rise due to forecasted increase within the minority population (Peck, Logan, Maizlish, & Van Court, 2013; Waidmann, 2009; California Heart Disease and Stroke Prevention and Treatment Task Force, 2007). The Census bureau has estimated a substantial increase in the aging minority population as well (Waidmann, 2009), which will further impact spending and costs associated with stroke disparities since strokes primarily affect the older population (Demaerschalk, Hwang, & Leung, 2010; Demaerschalk & Yip, 2005). A

decrease in stroke disparity of merely 5% percent would mean an annual saving of \$320 million dollars (Wyatt, 2012).

The risk of morbidity and mortality are far greater for African Americans (Meyer, Yoon, & Kaufmann, 2013; CDC, 2011). Racial and ethnic minorities have a higher occurrence in the burden of preventable disability, death and worse quality of care, even after adjusting for confounding factors such as access (Williams, Angstrom, Friedman, & Schulman, 2007; Institute of Medicine {IOM}, 2002; Brach, & Fraser, 2002). A review of the literature suggests that African Americans have a higher occurrence of stroke risks, incidence, as well as poorer outcomes in contrast to the rest of the population. Some of the reasons are the result of genetics, environmental, social influences and the healthcare system (Liebson, 2010; Trimble & Morgenstern, 2008; Gunarathne, Patel, Gammon, Gill, Hughes, & Lip, 2009; Heuschmann, Grieve, Toschke, Rudd, & Wolfe, 2008). Furthermore, minorities are less likely to seek emergency care, and are less likely to be aware of stroke signs and symptoms (Sallar, Williams, Omishakin, & Lloyd, 2010; Ferris, Roberston, Fabunmi, & Mosea, 2005).

Effective management of stroke requires the administration of recombinant tissue plasminogen activator (rtPA) thrombolysis within three hours of suspected stroke (National Institute of Neurological Disorders and Stroke, 1995; Marler et al., 2000; American Heart Association, 2013; Go et al., 2013). Therefore, it is necessary that symptoms be recognized in a timely fashion to permit rapid admission to the emergency room. However, many patients do not receive this evidence-based treatment (Reeves et al., 2010; Reeves, et al., 2005; Fonarow et al., 2011), primarily as a result of pre-hospital delays (Kleindorfer et al., 2010; Teuschl & Brainin, 2010). Besides targeting preventable risk factors (Seshadri, Beiser, Kelly-Hayes, Kase, Au, Kannel, & Wolf, 2006), approaches to raising stroke recognition has frequently been engaged to



decrease pre-hospital delays, both in the general population and in the African American community. Current research reveals that awareness of the warning signs of stroke is low overall within the population, with an even lower level of awareness within the minority population (Jones, Jenkinson, Leathley, & Watkins, 2010; Hickey et al., 2009; CDC, 2008). Thus, improving the recognition of stroke is a national initiative in many parts of the world (Royal College of Physicians, 2012; Haute Autorite de Sante, 2009; National Stroke Foundation, 2007, 2008, 2009). A recent review (Teuschl & Brainin, 2010) demonstrated that strategies to increase awareness about symptoms of stroke as a medical emergency and reducing stroke risks have been adopted nationwide. These plans have utilized various avenues and strategies, such as social media announcements, community empowerment and advocacy, faith-based organizations and health education methods.

### **Problem Statement**

Although African Americans only make up 6% of the total population in Riverside County, they made up the highest proportion of people suffering stroke morbidity and mortality. In 2010, African Americans had the highest rate of stroke, which was higher than the County rate of 40.5 per 100,000 populations. (Riverside County Department of Public Health, 2013). Stroke rates among African Americans were higher than the state average (Riverside County Department of Health, 2013). The stroke disparity that is seen among racial groups in the United States is multifactorial, resulting from unequal access, provider biases, racism, lack of system policy, lack of knowledge, and social support (LaVeist, 2005; Donnan et al., 2008; Trimble & Morgenstern, 2008; Dawson & Walters, 2005; MohdNor et al., 2005; CDC, 2005). Though many programs and interventions and practices have concentrated on recording, reducing and eliminating disparities between specific members of society, such as those belonging to a

cultural, ethnic or socioeconomic group, it is essential to concede many of these elements are interrelated and interdependent thus, establishing a need for added all inclusive and ecological approaches to the undertaking of disparities (Singh-Manoux & Marmot, 2005; Angus et al., 2007; Spencer, 2007; LaVeist, Thorpe, Galarranga, Bower, & Gary-Webb, 2009).

The collaborations between the informal and formal health systems can be an asset and act as generalized resistance resources such as social support and social networking and access to health promoting activities within the African American community. The church, faith-based community and community-based organizations can provide a social network and support by which to increase one's comprehension of one's environment and allow for the application of meaning to situations, which can provide the motivation to take action. The faith-based community can also be used as a vehicle in promoting health activities and providing the necessary tools and skills in managing stroke risks, increasing awareness, advocacy, empowerment and cardiovascular health promoting activities within the community.

### **Purpose Statement**

This paper will describe efforts to address the chronic problem of stroke, complications of stroke and stroke risks among the African American population in Riverside County. These efforts were accomplished through the implementation and evaluation of PRAISE; promotion, recognition and advocacy in stroke education. PRAISE is a faith-based, asset approach project aimed at improving stroke knowledge, awareness, management skills and stroke outcomes among the Black population.

### **Background of the Community**

Covering more than 7,200 square miles of rich waterway, splendid mountains, deserts, slopes, and grasslands, in California, Riverside County ranks the fourth largest county in the

state. The County borderlines with Imperial, Orange, San Diego and San Bernardino counties; as well as the State of Arizona. Within the last ten years, the proportion of the population self-identifying as Hispanic increased from 36% percent to 42% percent. The White population saw a decreased from 51% to 45%. African Americans made up 6% of the population in 2010, and the Asian population made up 5% of the population during the same time period (County of Riverside Department of Public Health, 2014). About 50% of Riverside County residents between the age of 18 to 24 years old have a high school degree or less, 4.4% of residents 18 to 24 years of age have a bachelor's degree or higher. Compared to a college education rate of 7.8% percent for California and 9.2% percent for the United States. In Riverside County, men are less likely to have graduated from high school than women. The dropout rate for high school students is 3.7%. The lowest dropout rate was seen among Asian students (1.4%), while the highest dropout rate was noted among African American students (5.3%) (County of Riverside Department of Public Health, 2014).

Those who have steady employment reports better physical health in comparison to those who are unemployed or retired (Ross & Mirowsky, 2005). One study noted that employees who lost their job were two times more likely to report having hypertension, diabetes, or heart disease over the following year and a half, in comparison to people who were continuously employed (Rabin, 2009). Since 2007, the unemployment rate in Riverside County more than doubled, from 6% to 14.7% percent and the rates of unemployment in Riverside County have surpassed the rates for California and the United States for much of the last decade. In 2010 the unemployment rate was 15.3%. The Asian population has the lowest unemployment rate (9.8%) with African Americans having the highest rate (21.6%). The unemployment rate for the same year was more than two times higher for those who only had a high school degree in

comparison to those with a college degree (18.9% and 7.1% respectively) (County of Riverside Department of Public Health, 2014).

Although most of the country saw a rise in the amount of individuals living under the federal poverty level, Riverside County has seen a larger increase in poverty compared to other areas. It has also seen an increase in the number of individuals without health insurance since 2001 with 15.7% uninsured and 19.1% in 2009. The minority population was observed to be more likely to have no health insurance coverage as well as be more likely to live 100% percent and 200% percent below the federal poverty level (County of Riverside Department of Public Health, 2014).

In Riverside County people have been living longer but mortality rates have remained slightly higher than the state (Riverside County Department of Public Health, 2013). This is related to the differences in health behaviors, diagnosis and treatment of chronic conditions. The four leading causes of death in 2012 were coronary heart disease, cancer, chronic lower respiratory disease (CLRD) and stroke (Riverside County Department of Public Health, 2013). Stroke is the fourth leading cause of death in Riverside, affecting 6% of the population annually.

Examining mortality and morbidity rates due to stroke uncovers racial disparities as well. The mortality rate for African Americans rose 14.2% from 52.1 per 100,000 in 2006 to 59.5 per 100,000 in 2010 (Riverside County Department of Public Health, 2013). With the exception for African Americans, most racial and ethnic groups experienced a decline in stroke mortality (Peck, Logan, Maizlish, & Van Court, 2013). There was a positive correlation between cardiovascular diseases and stroke in population with the lowest socioeconomic status in California as a whole (Peck, Logan, Maizlish, & Van Court, 2013), with Riverside County bearing one of the most disproportionate rates, 3.9 versus 2.3 for the state (Reynen, Kamigaki,

Pheatt, & Chaput, 2007, 2011).

PRAISE aimed to improve knowledge, awareness, advocacy and outcome of stroke risk factors for African Americans in Riverside County by harnessing the resources of the church, part of the informal health system of care, and Health Heritage Movement, which represent the formal system of care. This collaborative effort also included a locally connected faith-based health promoting organization, community health workers, pastors and first ladies of the church, certified dietician and nutritionist, a certified physical fitness trainer, a trained chef, a registered nurse and a motivator.

### **Literature Review**

#### **Role of Churches and the Faith-Based Community in African Americans Health**

Historically, the root cause of health disparities in the United States has centered mainly on race and ethnicity. W.E.B. DuBois was one of the first scholars to acknowledge the connection between health and socioeconomic status. In the publication of *The Philadelphia Negro*, DuBois emphasized circumstances such as low income, social status, employment, education, leadership, and the African American church as a major impact on the health of the individual (Natale-Pereira, Enard, Nevarez, & Jones, 2011).

As far back as the 1990's health promoting activities have involved African American churches. Churches have long been involved in providing educational services, which include screening for breast cancer (Markens, Fox, Taub, & Gilbert, 2002), prostate cancer (Collins, 1997), heart disease prevention (Oexmann et al., 2002), smoking cessation classes (Schorling, Roach, Siegel, Baturka, Hunt, Guterbock, et al., 1997; Stillman, Bone, Levine, & Becker, 1993), diabetes management (McNabb, Quinn, Kerver, Cook, & Karrison, 1997), weight reduction (Kumanyika & Charleston, 1992), and nutrition education (Campbell, Demark-Wahnefried,

Symons, Kalsbeek, Dodds, Cowan et al., 1999). It should also be noted that past researchers have found that the church is where African Americans feel trust and feel confident about the information they receive (Johnston & Benitez, 2003). Davis et al (1994) found that the faith community continues to address issues that meet the needs of their congregants. African American churches recognize the importance of spiritual, physical, and mental health, and welcome delivery of programs at the church (Johnston & Benitez, 2003; Markens, Fox, Taub & Gilbert, 2002; Jackson & Reddick, 1999; Ammerman et al., 2003). These churches are primary and key stakeholders that promote health education to their attendees (Resnicow et al., 2002). It is with that in mind, disparities reduction involving empowerment, capacity building, and increasing one's sense of coherence through health education and health promotion will require more deliberate collaboration with African American churches (DeHaven, Hunter, Wilder, Walton, & Berry, 2004).

### **The Church and Faith-Based Health Promoting Activities**

Providing faith-based health promotion and health education activities has shown promise in improving health outcome among the African American population (Newlin, KnafI, & Melkus-D'Eramo, 2002; Yanek, Becker, Moy, Gittelsohn, & Koffman, 2001). A systematic review of the literature found most programs focused on primary prevention, general health maintenance, cardiovascular health, or cancer. Considerable impacts were seen in the reduction of cholesterol and blood pressure levels, weight and disease symptoms, and increases in the use of mammography and breast self-examination (DeHaven, Hunter, Wilder, Walton, & Berry, 2004).

A randomized trial of 24 primarily African American churches found that diabetic participants readily participated in an intervention comprising of exercising, diet, and self-

management. The program was noted to improve short-term metabolic control (Samuel-Hodge et al., 2009). A similar study evaluating the effectiveness of a faith-based diabetes education program for African American adults noted that overall knowledge about diabetes was increased (Wade, 2005). Similarly, in a translational diabetes prevention intervention conducted by Boltri, Davis-Smith, Okosun, Seale, and Foster (2011) among African American participants, found improved outcomes in weight, body mass index, and fasting blood glucose. The faith-based, community-based participatory program implemented in the lower Mississippi Delta found that on average, participants were able to lose 2.34kg from their baseline weight, with a 16-week follow-up change of 2.7% of body fat loss. This program also reported that the participants enjoyed the spiritual and group aspect of the program (Yeary et al., 2011). Having the participation of the church as well as community volunteers, faith-based health promoting and advocacy organizations can prove to be a powerful force and is linked to improve health outcome among their congregants (Rowland, n.d.).

The Body and Soul was an intervention that was undertaken through the collaboration between two universities, American Cancer Society, and the National Institute of Health in which they sought to answer whether or not a collaborative and participatory approach involving the African American church had an impact on health outcome of their congregants. The research was also aimed to distribute and examine the impact of nutrition education for African American. They wanted to evaluate this intervention from a real world perspective. The Body and Soul intervention was created within for main themes; a committed pastor, church activities that promote healthy eating, a church environment that promotes healthy eating, and peer counseling that motivates church members to eat a healthy diet. The study found that participants showed a substantial increase in the amount of fruits and vegetables they consume after a six

months post intervention evaluation. Ultimately, the research noted that activities that incorporated community involvement and participation from community volunteers and volunteer agencies that provided health services could be successfully implemented in a real world situation (Campbell, Carr, McCarty, Wang, Periasamy, et al. 2004).

Similarly, in an efficacy collaborative study conducted by the National Cancer Institute, American Cancer Society, and research groups, they found attendance at project events, receiving educational materials, and self-reported quality motivational interviewing calls were associated with increase fruits and vegetables intake and decreased fat consumption. The Body & Soul health initiative consisted of a 24-week intervention delivered over a 3 year period to Black female church members. The goal of the study was to evaluate the effectiveness of a faith-based community intervention developed to decrease obesity related outcome was found to be very successful (Campbell, Resnicow, Wang, & Williams, 2007). Faith-based programs have also been shown to improve cardiovascular disease risks.

Cardiovascular (CVD) related diseases are the leading cause of death in the United States. Several risk factors have been associated with the development of CVD including family history, diabetes, hyperlipidemia, hypertension, smoking, and overweight and obesity. The constellation of these factors including hypertension is referred to as metabolic syndrome (Gaillard, Schuster, Bossetti, Green, & Osei, 1997). Cardiovascular diseases are an increasingly common condition in the United States (Lucove, Kaufman, & James, 2007), and are especially prevalent among African Americans (Gaillard et al., 1997). Vigorous physical activity is recommended as a key prevention to metabolic syndrome. Even though the health benefit of physical activity is widely known, only 30% of U.S. adults take part in an active lifestyle.

Shuval et al. (2011) illustrated that participants in a faith-based physical activity program



successfully decreased or eliminated their cardiovascular disease risks. A church project assessed the impact of a church-based nutrition and physical activity strategies on cardiovascular risk among African American women. The study consisted of a standard intervention group, a standard intervention group with a spiritual component, and a self-help group. Participants assigned to the standard intervention with the spiritual strategy were able to achieve clinically relevant improvements post one-year follow-up of program initiation (Yanek et al., 2001).

Finally, a faith-based study comprising of 41 overweight and obese church congregants were found to have improved indexes of metabolic syndrome, increased self-reported wellness, decrease weight, body fat, and central adiposity after taking part in a eight weeks diet and exercise program (Ivester et al., 2010).

African American men are 60% more likely to develop prostate cancer and twice as likely to die from the disease. A pilot study was performed to examine the efficacy of a spiritually based educational intervention for increasing informed decision making for prostate cancer screening among African American men. The study had a small sample size but did reveal findings that suggest that a spiritually based approach may be promising for use in promoting awareness of prostate cancer among church-attending African American men (Holt et al., 2009).

The church and the faith-based community is a capable medium for improving stroke outcome. The church is an asset, which can increase empowerment and advocacy in the community and thereby increase sense of coherence among individuals and the community at large. The African American church for the most part is an unexploited but powerful resource if health care disparities are to be eliminated. The church community is a major source of social support, social network, and community leadership in numerous African American communities.

The African American church serves not only as the link between the communities and health care, but also as one of the chief providers of health care information. As such, the church can serve a critical role in improving health outcomes among African American (Giger, Appel, Davidhizar, & Davis, 2008).

Efficacy of church-based approaches may be due to the importance of church life in the African American population (Christie, Watkins, Weerts, Jackson, & Brady, 2010). With the role of the church as a healing source in the lives of African Americans, church based support groups reach families who might otherwise struggle alone (Pickett-Schenk, 2002). Faith-based organizations are potential partners in facilitating advances in health outcomes (Asomugha, Derose, & Lurie, 2011). Communities without access or resources to traditional health promotion programs benefit most from faith-based and church led health promotion programs. Successful faith-based and church-based programs have been found to have the following main components: supportive network, positive health values, availability of services, access to facilities, community-focused interventions, healthy choices, and social support. These elements are recommended for new programs to foster future success in health promoting activities (Peterson, et al., 2002).

### **Gap Analysis**

Stroke health related quality of life is multifactorial and includes not only cardiovascular disease but also psychological and social factors. It is clear that a variety of individual and environmental factors influence one's overall health; one of which is sense of coherence (SOC) (Shi & Stevens 2010; Antonovsky, 1987; Antonovsky, 1979; Kosa, Antonovsky, and Zola, 1969). African American parishioners are more likely to attend and take part in church activities (Jackson, Heaton, & Dennis, 1990) and considering that about 70% of African Americans attend

church (Billingsley & Caldwell, 1991; Sahgal & Smith, 2009), faith-base health-promoting activities hold a lot of promise. To date, few interventions have utilized community-based organizations and faith-based health outreach organizations as a generalized resistance resource, nor have there been many faith-based health promoting activities that have applied an asset based approach to health promotion and cardiovascular health. Health promoting activities aimed at reducing stroke disparities may be more effective if it is multidimensional in its approach and it considers psychological, environmental and socioeconomic factors. Too often interventions are aimed from a needs perspective versus an assets approach, which can quickly lead to blaming of the victim.

Lindstrom and Eriksson (2010) view disease prevention and health protection interventions comparable to safeguarding swimmers in a rapid river by having a barricade or a life preserver. However, a better and ecological approach would be getting people to swim better by obtaining swimming lessons and skills, which are similar to health promotion. Health promotion empowers people to employ self-advocacy and take control over the determinants of health. This process involves activities aimed at strengthening and increasing one's skills and capacities. Health promoting activities also increase the ability to effectively mobilize and change the social determinants of health in order to improve their effect on the health of the population and individuals (Nutbeam, 1998). Strategies that focus on capacity building as apposed to illness have proven to be more successful in health outcome and in addressing inequities by allowing individuals and communities to utilize resources they are capable of accessing (Shirani, 2010; Foot, 2012; Ashton, 2010; Foot & Hopkins, 2010).

### **Conceptual and Theoretical Framework**

The primary goal of the PRAISE project is to improve cardiovascular health promoting

activities of participants by rallying community-based partners and improving the provision of collaborative efforts that offer resources for cardiovascular health promotion. The proposed program includes utilizing applicable instructional methodologies and addressing methods for health promotion, asset building, empowerment and advocacy. The theoretical framework of asset-based approach and the conceptual underpinnings of the faith-based approach to health promotion guided the PRAISE program.

Strategies that focus on capacity building and utilize an asset-based approach as opposed to deficits and needs have proven to be more successful in health outcomes and in addressing inequities by allowing individuals and communities to harness skills, knowledge, connections and resources they are capable of accessing (Shirani, 2010; Foot, 2012; Ashton, 2010; Foot & Hopkins, 2010). Salutogenes is one such theory that has proven to be successful in health promoting activities.

### **Salutogenesis Theory and the Sense of Coherence Construct**

The Salutogenesis theory is considered a borrowed theory from the social sciences and behavioral sciences. The Salutogenesis concept was introduced in 1979 by the sociologist Aaron Antonovsky. Unlike the pathogenesis theory, the Salutogenesis concepts study health development (Becker, Glascoff, & Felts, 2009). Within the Salutogenesis concept, Aaron Antonovsky pose the question, “How can this person be moved toward greater health”? (Antonovsky, 1979, p. 14). Antonovsky developed this idea from studies that was conducted on women survivors of the holocaust. In these studies it was noted, despite the stress created by the horrific circumstances holocaust victims had to endure, a good amount of the victims not only recovered and survived, they were able to move on and thrive (Becker, Glascoff, & Felts, 2009). Antonovsky has conducted a number of research projects in the 80’s, and 90’s and among others

to examine this phenomenon in an effort to explain and describe factors that promotes health.

The major concepts of the Salutogenesis theory is the sense of coherence (SOC) construct, it is defined as (Antonovsky, 1987) “ The sense of coherence is a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one’s internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment, and engagement.” (p. 19). SOC has three subparts, comprehensibility, manageability, and meaningfulness that Antonovsky has documented to be associated with an overall better health. (Antonovsky, 1979, 1987, 1996). The major assumptions of the Salutogenesis theory is that people who are effectively able to utilize their generalized resistance resources will be able to maintain and have a strong sense of coherence and these people tend to be healthier.

In defining the major theoretical concepts, comprehensibility refers to the accuracy that one can discern stimuli from the internal and external environments, comprehensibility deals with how the individual see and understand information as being structured, clear, and making sense (Nel, Crafford & Roodt, 2004). Manageability involves the extent that the individual believes that their situation is manageable and that they can effectively deal with them through perceived available resources (Nel, Crafford & Roodt, 2004). Meaning refers to the notion that life makes sense and that the situation is valuable enough to pursue and commit to (Ryff & Singer, 1998). It is hypothesized that there is a positive association between sense of coherence and one’s well being.

Another aspect of Antonovsky theory is what he coined generalized resistance resources (GRRs). The significance of GRRs is that they provide life experiences that encourage the

development and maintenance of a strong sense of coherence (Antonovsky, 1987). There are various types of GRRs, there are physical and biochemical nature, such as immunosuppressors, money, healthcare, knowledge, intelligence, emotional, interpersonal, and relational (Strumpfer, 1990). In effort to classify GRR, Antonovsky (1987) emphasizes predictable responses and feedback, which are employed to make sense of one's environment. If an individual is able to appropriately use GRR's there will be a positive outcome such as developing and maintaining a strong sense of coherence, health, and well-being. The main theme and most important of all GRR's is the fact that they assist people to smooth the progress of making sense out of stressors. There is a positive correlation between individuals that have a strong sense of coherence and the ability to combine and use GRR's that is available to them (Mlonzi, 1998).

Antonovsky's (1979, 1987) construct of sense of coherence (SOC) is a vital scientific construct. The Salutogenesis theory and SOC are widely accepted in part for their practical importance and can be utilized in the identification, prediction, and improvement of health status. Salutogenesis is rooted in asset-based approach to community and public health. Implementing health promoting activities that involve the African American church will not only provide for stability and coherence, but can assist the individual in comprehending their external and internal environment, the ability to manage stressors, and provide for meaningful patterns of life experience.

The African American church has always taking a part in the provision of health promoting activities and has also been instrumental in advocacy and political work involving the health of the community (The Center for African American Ministries and Black Church Studies, 2013; Savage, 2012). Over 40 years ago, Dr. Martin Luther King Jr. stated "Of all the forms of inequality, injustice in health is the most shocking and inhumane." (Cook, 2007). The same

sentiment continues to resonate within African American churches throughout the country.

African American churches continue to play a major role in the provision and maintenance of health, health education and health promoting activities within the community (Dodani, Kramer, Williams, Crawford, & Kriska, 2009; Blank, Mahmood, Fox, & Guterbock, 2002; Taylor, Chatters, & Levin, 2003; Peterson, Atwood, & Yates, 2002). Therefore, should be sought out as a vehicle in promoting empowerment, self-advocacy, and increasing and maintaining sense of coherence.

### **Method/Strategies/Implementation Application**

#### **Background**

At the start, the primary partners for the PRAISE project were Healthy Heritage Movement (HHM), Health Ministry Alliance (HMA), and the churches. The relationship between HHM, HMA and the DNP student was formalized via a service agreement to clearly define the roles each party would play in the delivery of PRAISE. HHM supported the framework and was an advocate for engaging staffs and other healthcare providers and HMA to collaborate on promoting stroke knowledge, awareness, advocacy, cardiovascular health promoting activities and positive outcomes.

#### **Organizational analysis of project site**

Healthy Heritage Movement is a non-profit community based organization that provides health education and health advocacy. HHM was founded in 2005 and incorporated to advance health equity in the African American community. Working in partnership with churches, hospitals, health agencies, city and county officials, HHM works to provide culturally relevant resources, peer navigation, advocacy training and access to resources and services that will contribute to health promoting activities. HHM service both Riverside County and San

Bernardino County in California.

HHM's mission is to eliminate health disparities and health inequity within the African American community through health promoting activities, education, empowerment and advocacy that will create access to health care, quality and nutritious foods and beverages, and livable communities. Their vision is to profoundly improve the health of the African American population. They provide global leadership through local engagement in order to transform the health of African Americans through an ecological transformational model of multi-disciplinary, interdisciplinary, and intra-disciplinary collaborations, engaging a wide breadth of communities, faith-base partners and local health partners.

HHM has over ten years of experience providing education, preventive screenings, access to care, and health resources to the African American communities. Since 2005, the signature event of HHM has been the bi-annual Healthy Heritage Wellness Conference (HHWC). The HHWC brings together over 500 community members to participate in a health exposition with over 70 exhibitors, wellness screenings, and preventative workshops taught by leading experts in the health care field, community, and public health. Healthy Heritage's current health education programs include: Black Barbershop Inland Empire Health Outreach; Beauty Inside and Out (Women Hair Salon Wellness Outreach); Women's Wellness Weekend; Diabetes Management Classes; Free Nutrition Counseling; Healthy Lifestyle Classes, Seminars, and Workshops; the Health Ministry Alliance; and the Healthy Heritage Advocacy Academy. These activities reached approximately 3,000 individuals and their families in 2013. HHM has successfully created and established a Health Ministry Alliance (HMA), officially launched in 2010. The HMA was an addition to the current outreach to the faith-based community, which has been taking place since 2005. Currently, the HMA operates in 7 churches in Riverside County and has



reached approximately 500 people on a regular basis. Healthy Heritage has made it a point to work closely with the faith-based community by recruiting churches with a large percentage of African American (AA) members.

### **Project Setting and Target Population**

The target population for this project were African American adults age 20 years and older who currently participate in church functions. Inclusion criteria included attending churches with a high level of interest and participation in local activities, such as revivals, conferences and religious events. Participants were recruited from the current established churches within the HMA, Riverside County, and San Bernardino County. The HMA is made up of seven churches, which are primarily made up of African Americans. The churches are primarily non-denominational.

Eligible churches were made up of at least 80% African American congregants, average Saturday or Sunday attendance of at least 150 individuals, and not currently participating in active program in weight control, exercise, smoking cessations, or cardiovascular health. Although the PRAISE project was implemented through HHM and HMA, the delivery and implementation of the project was at the location of the selected and participating church within the Inland Empire. As a result of time constraints and resources, one church was selected to participate in the PRAISE program.

A maximum of 100 participants from the selected church were recruited from four different ministries within the church. Twenty-five participants were chosen from four different ministry within the church on a first come first serve basis. The four ministries were the women ministry, Act 1:8, which is a health outreach ministry made up of both women and men who have a desire to ministry in the community, Titus ministry, which is made up of parishioners who

are 55 years old and older, and the men's ministry. Each church ministry has about 300 church members. Participants were recruited using informational flyers, meeting with lead pastors, ministry group leaders and informational session during scheduled meetings and activities for each ministry. A total of 85 out of the 100 participants recruited took part in the program. Total number of participants recruited provided for statistically significant data while providing for feasibility in delivery.

Exclusion criteria included pregnancy or plan pregnancy in the following year, myocardial infarction or stroke in the past six months, chest pain or angina with the need to use nitroglycerine in the past six months, cancer treatment and dialysis.

### **Resources, Constraints, Facilitators, and Barriers to Project Implementation**

Apart from the founder and CEO of HHM, the organization has a program coordinator who has extensive experience in managing programs within the Inland Empire. The current program coordinator has served vulnerable populations while employed with the American Cancer Society and presently as a key player in the delivery and success of the "*Living Life on Purpose*" program. The program coordinator had access to the HMA churches and is a trusted member of the seven churches currently comprising the HMA. Healthy Heritage also contracted with experts in the field of health education. The certified dietician certified physical fitness instructor, motivator and a chef were instrumental in the delivery of the PRAISE project.

### **Protection of Human Subjects**

Internal Review Board (IRB) approval was obtained and granted from the University of Massachusetts, Amherst. Protecting privacy and the rights of each participant who chose to participate was considered with every encounter. Steps were implemented to protect participants' medical information, privacy and data collection methods.

## **Project Design and Procedure**

Adult learning theory provided direction to the selection of course contents and approaches. Theories about adult learning are grounded in part on the works of Knowles (Knowles, 1973). The adult learner is viewed as self-directed, possesses life experience, ready to learn and require instant application of knowledge rather than delayed application. Teaching methods planned included lectures for new information, discussion sessions for sharing and clarification, story telling, demonstrations, interactive activities, i.e. physical training, cooking classes, windshield survey of community, incorporating faith-base teachings and principles.

Components of the PRAISE project reflected evidence and research-based intervention from the American Cancer Society's Body and Soul Program (Resnicow, Kramish, Carr, McCarty, Wang, Periasamy, Rahotep, Doyle, Williams, & Stable, 2004). The University of Miami Miller School of Medicine Gordon Center for Research in Medical Education Advanced Stroke Life Support (ASLS) stroke curriculum was utilized. A modified version of the pre-hospital providers course was utilized with church participants. Each session allowed participants to ask questions and formulate health promoting activity goals.

The project centered on several core components. Since the project was a collaborative effort, key stakeholders included Healthy Heritage, community health worker, health ministry church leaders, a motivator, chef, nutritionist, a certified physical fitness trainer, and a registered nurse (RN). HHM and their staff served as key informants and the link between formal and the informal health systems.

All participants name and identifying information were protected. Microsoft Access database was utilized in the creation and management of participants' data. Field in Access table automatically generated numbers. These automatically generated numbers is a unique key, which

separates records from each other and makes them unique. These numbers double over as the records number. A health screening consent was obtained from all participants as well as notice of privacy practice (HIPAA) and signed HIPAA form. All participants' data were stored in a secure location in a locked cabinet.

The PRAISE project was an intensive 12-sessions training course. Each session lasted two hours and was delivered twice a week. Each educational session started with an encouraging passage and scripture from the bible highlighting strong bible role models and success despite great tribulation. The assistance and buy in from the pastor and first lady of the church were sought prior to program implementation. A stakeholder letter was obtained from the lead pastor.

Ministry leaders were charged with reading weekly health promotion activities for stroke during scheduled worships and sermons. Ministry leaders provided talks on the importance of utilizing the church, church members, available church resources and families as a support and social network. A weekly newsletter was developed and provided information, tips, support and progress of participants. Mini post cards with words of inspiration from the bible were also generated and placed on church bulletin boards. Church attendance served as an opportunity for building trust within the church and among the congregants, provided an opportunity to evaluate participants' progress, conduct observation survey, provide personal encouragement, motivation and continued support, as well as provides an opportunity to answer or clarify any points of the program.

Participants were educated on the concept that "time is brain" and stroke (brain attack) is an emergency. This project sought to decrease disparity in stroke risks, stroke awareness, stroke care and treatment among Black patients through empowerment and capacity building. The course presented the recognition of stroke, using knowledge of the face, arm, speech and time

(FAST) scale, early management, post stroke care, and stroke health promoting activities; navigating the health care system, pre-hospital care and management, coping and advocating for the right care at the right time, controlling of LDL, physical activity, and diet and nutrition.

The motivational speaker kicked off the program during the retreat. Early on during the program planning phase it was decided that the lead pastor would deliver the motivational speech infused spiritual sermon. The pastor lead retreat provided for support, modeling and leading by example. During the retreat information about the details of the program were provided, pre program assessments were completed and all relevant demographic data and program participation eligibility were collected (See Appendix C for detail).

The DNP student, who obtained informed consent and release form, conducted baseline assessment and administered the survey that covered some dimensions of behavioral and situational factors: (a) sense of coherence (SOC) scale, (b) health related quality of life, (c) Stroke awareness questionnaire (SAQ), (d) and stroke risk awareness survey. Clinical data included anthropometric, non-fasting blood glucose and lipid panel. The lipid panel consisted of total cholesterol, high-density lipoprotein (HDL), triglycerides and low-density lipoprotein (LDL), weight and height and waist circumference.

Pre-program cardiovascular risk assessment screening provided for participants' referrals to and follow-up opportunities with their healthcare providers as well as provided an opportunity for counseling and making the connection between healthy options and cardiovascular health. Diabetes or uncontrolled blood glucose, hypertension and increase LDL level have been linked to increase risk for stroke (American Heart Association {AHA}, 2014). AHA and the Black Cardiologist Association state that programs that emphasize increased awareness, education about stroke risk factors and cardiovascular health promoting activities should be utilize in order

to strengthen promotion and prevention (AHA, 2014).

At the time of the retreat, participants were be provided with the “Eat for Life” cookbook, “World Healthiest Foods”: a guide list to using fresh herbs, spices and natural food seasoning and flavoring, list of health promoting resources in Riverside, San Bernardino and San Diego County, free internet resources that provides cooking tips, recipes and nutritional information, a journal for documenting progression and goal rated activity within the program. Pastor and ministry leaders of the church provided a short sermon on health and relationship to the bible and the faith during each program session and during their ministry services.

### **Registered Nursing Educational Component**

The registered nurse (RN) delivered the educational programming and all stroke related educational teaching, empowerment and advocacy. Topics covered stroke education, navigating the health care system, pre-hospital care and management, coping and advocating for the right care at the right time and controlling for stroke risks. The education covered the pathophysiology of stroke, emergency procedures, frequency of stroke and preventive measures as listed below:

Session Two of the program covered awareness and advocacy.

Session Three provided strategies for self-empowerment and self-advocacy.

Session Four provided resources on how to mobilize one’s generalized resistance resources and provide education on an overview of stroke and

Session Five covered information on stroke treatment and management.

### **Nutrition Educational Component**

The Nutritionist was responsible for the delivery of healthy diet and nutrition educational component. Nutritional topics covered nutrition basics, hidden truth about sugar and salt, nutrition facts and myths, making healthy food choices on a fix budget, accessing and utilizing

healthy foods within the community and cooking healthy. Participants were required to complete simple homework assignments as a means to increase knowledge, awareness, empowerment and advocacy. Participants' homework assignment included reading their food labels and spices for hidden sodium, high fructose corn syrup, monosodium glutamate (MSG) and other hidden form of glucose. Their assignments also included "photo voice", which required them to take pictures and observational notes of their community. Participants were instructed to bring their pictures, notes and what they learned about their home products during the following session and share what they have learned about their own products in the home and the available resources within their community. As a means to educate participants about current available resources in the community, participants were instructed to locate one healthy food choice promoting resource in the community and share with other participants in the following session.

### **Chef Educational Component**

The chef provided demonstration on healthy cooking and provided healthy cooking tips. The chef's live cooking demonstration included utilizing locally grown organic fruits and vegetables. The nutritionist and chef worked closely in delivering the nutritional component of the project. The Chef provided cooking demonstration concurrently with the nutritionist nutritional topics. At the end of the twelve sessions participants were provided with a box of seasonal, local organically grown produce and were instructed to create a healthy dish to share during the last session of the program. This allowed for confidence, employing learned skills and knowledge immediately, and sharing of resources among participants. Unity Farm is a certified organic farm, which means there is no use of pesticides or insecticides, genetically modified organisms (GMO) or any other impurities. They farm only plants and cultivate what is naturally found for that season (Ruiz, 2014). Community members can purchased a large box of freshly

picked produce for \$35 dollars, which can serve a family of four for more than a week.

### **Physical Fitness Educational Component**

The certified physical fitness trainer delivered instruction on physical activities and maintaining a healthy weight. Physical fitness topics included keeping physically active and fit with a busy schedule, modifying physical fitness activities for the individual, physically impaired, space and time constraints. The physical fitness trainer provided demonstration as well as conducted a 30-minute session during each scheduled session, covering a different physical fitness topic each week. The physical fitness trainer provided tips during each session as well as provides local resources, which participants can continue to use during and post project completion. During session 11 participants created a health plan that uses San Diego County's Vial of Life medical information, next of kin, durable power of attorney for health and having a trusted friend or family member who can adequately speak on their behalf.

### **Goals and Objectives**

The primary goal of the PRAISE project is to improve cardiovascular health promoting activities of participants by rallying community-based partners and improving the provision of collaborative efforts that offer quality healthcare access and resources for cardiovascular health promotion. PRAISE aims to improve stroke outcomes among African Americans residing in Riverside County by strengthening cerebrovascular health promotion through increase knowledge, awareness and commitment to policy and environmental changes via a faith-based asset approach. Also, although the aim of this project is not weight reduction, participants should see a reduction in their weight. (See appendix N for program components and indicators).



### **Program Evaluation**

To evaluate the success of this program an extensive evaluation plan was developed based on the research. This plan is described below in relation to 1) the components of the educational plan; curriculum, and individual participants, 2) the evaluation instruments and when data are collected, and 3) and the overall project aims.

Post program assessments were obtained one-week post program completion, which included a semi-structured group interview with all church participants. The group interview questionnaire measured attitude and beliefs about stroke and stroke management. Post program implementation data included post-test on stroke education, cholesterol and sodium. Post program implementation data on weight, anthropometric, dietary and nutrition intake survey, and the influence of this course on changes that will occur in their daily routine regarding acute stroke, cardiovascular health and usefulness of information were collected. The instrument used to measure mastery at an individual level was the SOC questionnaire.

All pre and post data were compared for increase knowledge in cardiovascular health, stroke risks, management and treatment, change in health promoting activities, increase in self-advocacy, capacity and empowerment. A key component of the evaluation included goal activity rated at 4, 8 and 12-weeks for percent of achievement and content. Course and instructor evaluations were collected post each topic session. Course evaluations were rated on a 1–5 Likert scale with 5 being excellent. These evaluations provided useful information for future curriculum delivery and assisting in updating the course materials.

The two most widely used versions of the SOC questionnaire are the original version with 29 items and a shorter version with 13 items (Antonovsky, 1987; Larsson & Kallenberg, 1999). SOC-13 was shown to be reliable, valid, feasible and cross-culturally applicable

(Antonovsky, 1987; Larsson & Kallenberg, 1999). As a result the short version was used in the present program. According to Antonovsky's three postulated properties, the questionnaire examines three sub-dimensions: meaningfulness, comprehensibility and manageability (Antonovsky, 1987; Larsson & Kallenberg, 1999). Participants were asked to indicate their level of agreement with each of the items on a seven-point scale (1 = never, 7 = always). The total score was summed, which could range from 13 (low SOC) to 91 (high SOC), where a higher score indicated a stronger SOC or confidence and skills to effectively use available resources. Many studies have shown that the SOC changes with time, but Antonovsky assumed that it would stabilize in early adulthood with little subsequent fluctuations (Antonovsky, 1987; Larsson & Kallenberg, 1999).

The health-related quality of life (HRQOL) was assessed at baseline and follow-up using the Medical Outcomes Survey Short Form 36 (SF-36), and results were used to compute a physical component and mental component summary. The SF-36 is a generic measure because it assesses health concepts that are representative of basic human beliefs and ideals considered pertinent to everyone's functional status and well-being. It is not specific to age, disease or treatment and is widely used in health surveys aiming at measuring physical functioning, social and mental aspects of HRQOL (Ware & Kosinski, 2001; Loge & Kaasa, 1998). The SF-36 comprises 36 questions (items) along eight dimensions of health: physical functioning (10 items), general health (5 items), mental health (5 items) bodily pain (2 items), role limitation related to physical problems (4 items), role limitation related to emotional problems (3 items), social functioning (2 items) and vitality (4 items). An additional item, reported health transition, notes changes in general health over the past year. The response scores for each dimension are added, and the total is converted to a score between 0 and 100 (highest) (Ware & Kosinski, 2001;

Loge & Kaasa, 1998). A higher score indicates higher HRQOL. The SF-36 has been used in numerous studies with various medical conditions and individuals in various settings (Hayes, Morris, Wolfe, & Morgan, 1995; Andresen, Gravitt, Aydelotte, & Podgorski, 1999; Cumming, Salked, Thomas, & Szonyi, 2000; Seymor, Ball, Russel, Primrose, Garratt, et al, 2001). The instrument has demonstrated high reliability (Cronbach's alpha: 0.72–0.94) (Pit, Schurink, Nair, Byles, & Heller, 1996; Lyons, Perry, Beverly, & Littlepage, 1994), and good construct validity (Lyons, Perry, Beverly, & Littlepage, 1994), and convergent validity (Andresen, Gravitt, Aydelotte, & Podgorski, 1999).

### **Budget and Budget Justification**

Specific supports were required for education and training in the stroke awareness tool for participants, diet and nutrition, and physical fitness. Staff education, material development and printing, cooking demonstration, and hiring of the chef, physical fitness instructor, and nutritionist totaled \$3838.88. The total budget included in-kind donation, direct and indirect costs for the project. The DNP student coordinated and delivered the majority of the planned educational interventions as well as collects all pre-assessment and post-assessment data and performs all necessary data analysis. See appendix (J) for budget and budget justification.

## **Outcomes**

### **Participants Sample Profile**

Baseline data was collected for 85 participants as the final total enrollment for PRAISE. Table 2 provides the demographic characteristics of participants. The participants are majority midlife (51%) and older adults (46%); female (70%) and married (47%), and most have completed a high school diploma and some college level education (65%). Thirty-eight (38%) of all participants had high blood pressure and 33% respectively had high cholesterol. 37% of all

participants were diabetics. Over one quarter of the participants were current smokers (27%). Only 2.4% of participants had a history of stroke, while 2.2% had a TIA. Of those who had experienced a stroke or TIA, 17.5% and 24% were within the past 12 to 18 months. Almost half who had experienced a stroke were under the age of 65. However, the opposite can be said for those who had experienced a TIA, with almost 66% age 65 and over. The mean BMI was 37, 90% of participants were obese with a BMI greater than 30 (BMI > 30). The program found 13 out of the 85 (15%) individuals screened to be at high risk for stroke, which included those participants who had at least one or more modifiable risk factor for stroke.

**TABLE 1**  
**Participant Demographics (n =85)**

<i>Demographic</i>	<i>%</i>
Age, years	
20-40	6
41-50	19
51-60	29
61-70	32
>71	14
Average age, years	
Gender	
Male	30
Female	70
Marital Status	
Single	34
Married	47
Separated/Widowed	4
Highest level of education	
Less than high school	5
High school diploma/GED	25
Some college	40
College graduate	14
Post graduate education	5
Income, \$	
< 10,000	3
10,000-19,999	14
20,000-29,999	21
30,000-39,999	32
40,000-49,999	10
> 50, 000	19
Employment status	

Employed full-time (35+ hours/week)	36
Employed part-time (<35 hours/week)	4
Unemployed/looking for work	5
Not in the labor force (homemaker, retired, disabled and other)	40
Percentage with any type of health insurance	97

## Analysis

The statistical analyses were performed with the Statistical Package for Social Sciences version 18.0 (SPSS) using descriptive analyses of the baseline characteristics. Clinically significant lifestyle changes, the SF-36 scores and their changes were computed, as well as the baseline SOC scores. A clinically significant lifestyle change was characterized as a weight reduction of  $\geq 5\%$ . Changes in the physical component summary of two to five (2–5) points are defined as small clinically significant changes, whereas changes of five to eight (5–8) and greater than 8 ( $\geq 8$ ) are defined as modest and sizeable in clinically important changes. To assess achievement of lifestyle change, a multivariable logistic regression analysis was conducted employing the combined objective clinically important lifestyle change as the dependent variable with the numerous demographic and clinical variables, the SF-36 scores and the SOC scores as explanatory variables. To use SOC as an explanatory variable, the results for each single question were analyzed separately, each of the three scores for the sub-dimensions (meaningfulness, comprehensibility and manageability) and the total SOC score. Matched pairs *t* tests were used to measure statistical significance between baseline and follow-up mean values.

## Pre-program stroke knowledge

Participants were asked to give a definition for stroke. More than half of participants (60.5%) were able to provide some form of correct definition. Only about 24.8% of participants were able to define stroke as a blood clot in the brain (95% CI 22.0% to 27.5%). It was noted

that an additional 15.5% were able to identify stroke as a condition that affects the brain (95% CI 12.9% to 18.3%), and less than 8% (7.5%) were able to state that stroke was a circulatory problem involving the brain (95% CI 5.1% to 8.5%). Although some participants were not able to fully define a stroke, 6.9% were able to state symptoms that would normally be identified as symptoms of stroke (e.g., speech difficulty and arm weakness) (95% CI 5.3% to 8.6%).

Hemorrhaging in the brain was described by 6.9% (95% CI 5.2% to 8.9%). The majority of participants were not able to define a TIA (86%, 95% CI 83.4% to 88.9%).

### **Pre-program stroke risk factors**

Participants' knowledge of stroke risk factors for stroke was assessed using open-ended questions, without the provision of prompts. Based on previous studies utilizing the same SAQ, knowledge was defined as the ability to list two or more risk factors for stroke, as classified by the National Institute of Neurological Disorders and Stroke (NINDS) (National Institute of Neurological Disorders and Stroke, 2010). The majority of participants (72%, CI 95% CI 69.2% to 75.1%) were able to correctly identify two or more risk factors for stroke. Most participants listed smoking as the most common risk factor for stroke (55.6%, 95% CI 52.5% to 58.9%). High blood pressure, which represents a major risk factor in stroke, was listed as a risk factor by only 27.6%, (95% CI 35.8% to 30.1%) of participants.

### **Pre-program knowledge of stroke warning signs**

More than 66% of all participants were not able to list two or more warning signs of stroke (69.4%, 95% CI 66.5% to 92.4%). It was also noted that more than 41% of the participants (95% CI 38.4% to 44.9%) were not able to correctly identify any warning signs of stroke.

### **Pre-program responding to a stroke-calling 9-1-1**

Participants were asked an open-ended questions about how would they respond to a suspected stroke without any cues provided for answering. Less than half of all participants 46.9% (95% CI 43.9% to 50. 4%) would call 9-1-1 for an ambulance.

### **Pre-program recognition of emergency stroke treatment**

Knowledge of current intervention in treating a stroke was assessed by asking participants if they believed that stroke morbidity could be reduced by using certain type of treatments within a couple of hours of having a stroke. The majority of participants stated such emergency treatment did not exist (87.4%, 95% CI 86.1% to 90.1%).

### **Post-program stroke knowledge**

Individual knowledge gains included stroke symptom recognition (60.5% baseline to 94% at one week after program; and knowing to call 911 if stroke symptoms develop (47% baseline to 98% at one week. Assessment for knowledge of where in the body stroke occurs (8% baseline to 88% at one week), the warning signs of stroke (44.9%-69.4% baseline to 78%-100% at one week; varying percentage based on the warning sign, with severe headache being lowest and dizziness and loss of balance being the highest), and action that should be taken if you have any symptoms of stroke (46.9% at baseline to 100% at one week. Paired *t* tests demonstrated a 10.87% difference ( $P<0.001$ ) between pretest and posttest scores (Table 2).

**TABLE 2**  
**Paired t Test of Knowledge Gain (n = 85)**

	% Correct, Mean (SD)	df	<i>t</i>	<i>p</i>
Pretest	69.58 (19.76)			
Posttest	82.3 (17.32)	84	10.87	<0.001

### **Sense of Coherence and The Health Related Quality of Life**

The SOC score ranged from 27 to 89 with a mean score of 63 with a standard deviation of ( $SD \pm 14$ ). There were no significant differences in the SOC score with respect to gender, home relations or educational categories, but the scores were significantly lower for daily smokers 60 ( $SD \pm 14$ ) and subjects who were not working 58 ( $SD \pm 15$ ). Twenty-six participants were identified having clinically significant lifestyle changes, i.e., a clinically significant weight reduction one-week post program completion. SOC score was associated with the combined lifestyle change, with an adjusted odds ratio (OR) for a clinically significant lifestyle change of 1.21 (CI = 1.11–1.32) for each additional SOC point. This correlation differed little in the unadjusted model (1.17 (1.09–1.24)). A ten point higher SOC score was correlated with an OR for successful lifestyle change of 6.7 (2.8–16.1). Neither any single question nor any of the three sub-dimensions (meaningfulness, comprehensibility and manageability) in the SOC questionnaire was associated with successful lifestyle change. There was also a statistically significant association between a successful lifestyle change and a decreased physical HRQOL (lower PCS) according to SF-36 (Table 3), which yielded an adjusted OR of 1.08 (1.00–1.16) for each point decrease in the PCS score.

Besides increasing participants' knowledge, another intended effect of the program was influencing participants' abilities and skills in making healthier choices. Of the people participating in the program, 33% made a lifestyle change, only 49% saw a doctor despite the emphasis for physician follow-up, and 67% of the participants did not make any lifestyle change. No one stopped smoking after the program. After the program, many participants made changes in their lifestyle based on their modifiable risk factors for stroke; 64% changed to a low-fat and low-cholesterol diet, 45% had increased awareness and monitoring of their cholesterol, 31% of



participants began exercising, 26% began weight loss measures, 18% improved blood pressure monitoring, and 57% of identified smokers were attempting to quit.

### **Nutritional Knowledge**

The average score for nutritional knowledge achievement was about 38, which concludes a very weak nutritional level. The nutritional knowledge level was statistically associated with participant's age, educational level, occupation, marital status and obesity. The mean knowledge for the pre-test for all participants was 8.38 with a standard deviation of 17.99, and the mean knowledge for the post-test for all participants was 13.0 with a standard deviation of 15.75. A statistically significant difference was set at a value of  $<0.05$ . The results showed a p-value of 0.000 indicating a significant difference in improvement in knowledge overall in participants.

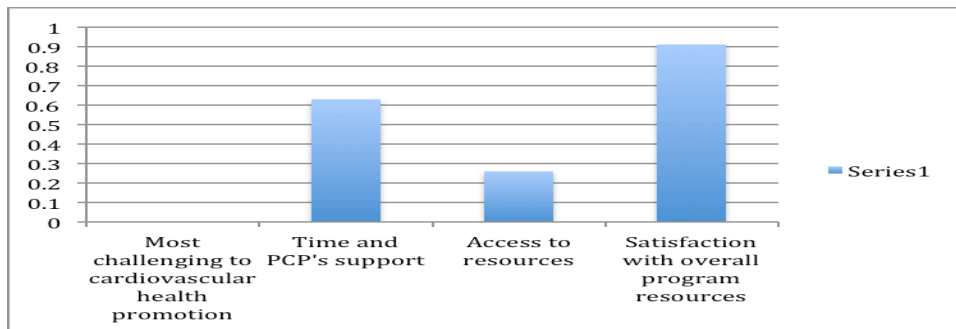
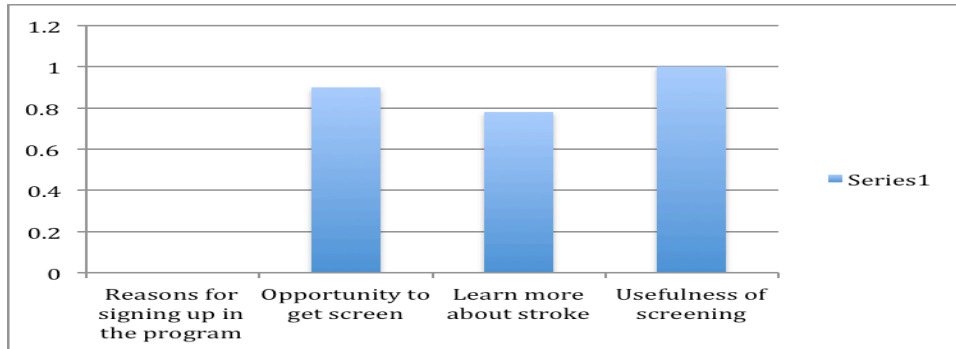
### **Post-program group interview**

Participants were asked to state some of the reasons they signed up for this program. Most participants stated they wanted the opportunity to get screened, (90%). The second most frequent reason cited for taking part in this program was to “Learn more about stroke and my risk for stroke” (78%). Most of the participants liked the interactive aspect of the program, “What I liked most was the fact that I was able to share my recipe to share with other participants.”

One hundred percent of all participants found that the pre-program screenings were really useful and provided a foundation from which to improve their stroke risks. Participants also stated they were happy with all of the resources provided in their folders, i.e. information on advanced health care directives, vial of life and cook book, (91%). When asked, what do you see as the most challenging when it comes to cardiovascular health promoting activities? The majority of participants stated finding the time to be physically active and having a primary care

doctor that supports their health, (63%) was important. Participants also stated having access to resources that were affordable and available was a major contributing factor and challenge to health promotion, (26%).

**Table 3.**  
**Post-program group interview**



## Discussion

The purpose of this paper was to describe efforts to address the increasing epidemic of stroke among African Americans in Riverside County through the implementation and evaluation of the PRAISE program and how collaborations between community-based organizations and faith-based delivery of health promoting programs enables efforts to improve knowledge, awareness, skills, advocacy and stroke outcomes among African Americans.

The findings suggested some positive changes among participants in (a) access to resources, support and networking in cardiovascular health promoting activities, (b) increase in

health related quality of life, (c) strong SOC, (d) increase knowledge, awareness and skills in managing stroke, (e) increase knowledge on nutrition and physical activities to promote health and decrease stroke risks and (f) improvements in major clinical indicators of stroke risks, anthropometric and weight. These initial analyses described are limited to pre and posttest evaluations; however, it is felt that these early positive outcomes can be attributed to the asset-based approach of the PRAISE program. It appears that the participants applied the knowledge and skills acquired from the PRAISE class sessions and the social support, networking and pastor involvement and encouragement provided for healthier options. Providing access to and additional resources within the community also provided for healthier choices among participants.

Understanding people from a Salutogenesis and ecological perspective also reverberate with earlier expression of the social model of health (Dahlgren and Whitehead, 1991), which challenged the deficit approach of the medical model, and proposed the need for services to be more aware and recognize the impact of people's wider environment and individual experiences and choices on health (WHO, 1986). Similarly, most vulnerable or marginalized communities apart from having needs and problems also have social, cultural and material assets. Identifying and mobilizing these assets and strengths can help individuals overcome the challenges of daily life.

The literature suggests, when services starts with emphasizing a community's assets instead of their needs, the community becomes more equipped at addressing its own needs, as does its capacity to effectively access and utilize external support (Foot & Hopkins, 2010). Asset based approaches support networking; create reciprocity, mutual assistance, supportive friendships and the ability to work cohesively with shared interests. This method garners and

promotes the resources in all communities. A strong sense of community, citizenship, empowerment and networks can generate results to galvanize change. An asset-based approach may also help communities to develop a greater sense of coherence, which can provide a voice with which to connect with systems in tackling structural roots of injustice and inequalities. It must also be recognized that although health assets are parts of the individual, they are not automatically utilized in a decisive or thoughtful manner.

The literature acknowledges the idea that health assets, whether internal or external, can influence and be utilized in difficult situations, but ultimately how this asset is used if any depends on the individual (Rotegard et al., 2010). The PRAISE project provided the resources, networking and supports, which is needed to successfully access, utilize available resources within the church and the community. This strategy is in alignment with the Salutogenesis theory that identifies the needs for health activities that will link individuals with access to health education, resources and support for self-empowerment and self-advocacy (O'Leary et al., 2011).

Although the primary goal of the PRAISE project was to improve stroke knowledge, awareness, advocacy, management and stroke health outcome among African American participants, an overarching aim was to address racial disparities in stroke by implementing a cardiovascular health promoting education within the church via the linkage of the formal health system, Health Heritage Movement. It is noteworthy to point out during the focus group, participants and church leaders expressed the belief that resources and training provided by the PRAISE program substantially strengthened their existing health ministries and made them better equipped to provide support to community members and congregants who might be at risk for stroke or other chronic diseases. In addition, as result of the program's success, the pastors

have agreed to continue the program year-round and open the program to all church congregants and the surrounding community.

### **Sustainability**

Maintaining and building on the work of the PRAISE program are important to the Riverside County community and the church community. Anecdotal evidence suggests that efforts to replicate best practices of the PRAISE program are being considered for other churches by Health Heritage Movement and the Health Ministry Alliance. There is a potential for the PRAISE project to align with participants' primary care providers (PCP's). The ability to collaborate with PCP as another link within the formal health care systems can further close the gap between the informal health systems of care and allow for follow-up services and resources to support their health.

### **Limitations**

One limitation of the current project is related to the incorporation of PCP's in the project. The PCP's were not directly involved in the actual implementation of the project. Participants were provided with all screening results, interpretation of the results and counseling and were educated to follow-up with their PCP, especially for those who were identified as having a stroke risk. Having collaborations with the PCP would provide for the potential to increase the effectiveness of the program within the church and the community at large. Another limitation is that the program has not been able to collect long-term data. Current data analyses only include baseline data and one-week post program implementation. However, participants and church leaders have agreed to allow for data collection at three months, six months and 12 months post program implementation.

## **Conclusion**

Increasing stroke knowledge, awareness, advocacy and management skills and improving outcomes involves an asset approach along with an ecological and system thinking to health promotion and health education, which utilizes an expanded team comprised of the formal and informal systems of care. The involvement of community-based groups and faith-based organization is essential because most strokes takes place outside of the healthcare system; the home, the workplace, and other areas of social environment as indicated by the high account of pre-hospital delays. Salutogenesis promotes asset building as appose to deficits or needs and utilizes the strength of the individual and the community in order to address health issues. An asset-based approach also allows for social support, networking and collaborations among various entities within the community. The documented history of faith-based alliances and coalitions working across systems and providing care from an ecological perspective with various entities has positioned them well to extend their reach and partner with other members of the health care systems and community based systems.

The PRAISE program was implemented on the foundation of an asset-based approach with the Salutogenesis theory as the framework. Salutogenesis allow for an upstream approach with the understanding that the antecedents of health assets, whether innate or acquired, constitute a person's genetics, values, beliefs and life experiences (Foot & Hopkins, 2010). The PRAISE project allow for the collaboration between community-based organization and the church, which provided time and a platform for church congregants to realize and acknowledge their individual and collective assets, building trust and network. Utilizing the Salutogenic approach, the PRAISE program was able to assist participants to effectively utilize generalized resistance resources already found within their disposal, i.e. social support and networks within

the church and the community, knowledge and skill building.

The program provided for increase sense of coherence (SOC); comprehensibility, enabling participants to understand and predict certain life stressors; manageability, having the ability use resources in a way that meets one's personal demands; and meaningfulness, having the ability to realize and make sense out of life stressor and be willing to invest the time and energy in solving those problems. PRAISE capitalizes on the influence and extensive reach of HHM, their involvement in many important health-related projects opened many doors. Likewise, the commitment of the health ministry leaders and lead pastors was critical for engaging members of the church. These relationships created trust and modeling as well as the bridge between the faith-based organization and the community-based organization. The combined efforts of the church and HHM have contributed to educated and informed church participants and increased networking among participants.

PRAISE proved to be a valuable intervention. It involved stakeholders both in the community and the church as well as providing for an all inclusive and ecological model of health promotion. PRAISE not only provides for stroke education but also provided a platform for advocacy and access to resources that enable the individual and the community in making healthier options.

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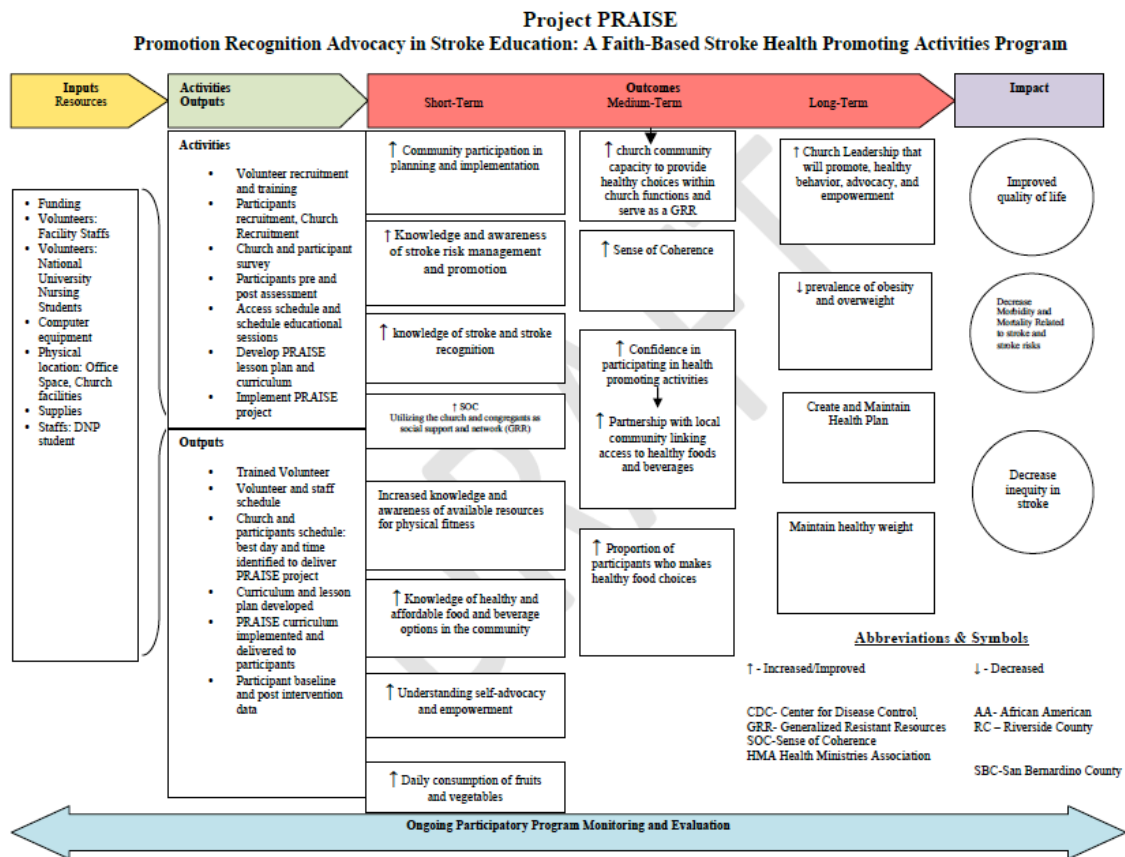
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## Appendix A. PRAISE Project Logic Model



**Appendix B. PRAISE Project Demographic Form**

PRAISE Demographics Form	
Promotion Recognition Advocacy in Stroke Education	
<b>Site Name:</b> _____ <b>Pt_ID:</b> _____	<b>Date:</b> ____/____/____ d  d   m  m  m   y  y  y  y
<b>Visit Type:</b> <input type="checkbox"/> Screening <input type="checkbox"/> Baseline	
1. Gender: <input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Zip Code: _____	
2. Date of Birth: ____/____/____ d  d   m  m  m   y  y  y  y	
3. ETHNIC/CULTURAL IDENTITY ("X" ONLY one with which you MOST CLOSELY identify): <div style="margin-left: 20px;"> <input type="checkbox"/> American Indian  <input type="checkbox"/> Alaska Native  <input type="checkbox"/> Asian  <input type="checkbox"/> African American  <input type="checkbox"/> Caribbean  <input type="checkbox"/> Native Hawaiian  <input type="checkbox"/> Pacific Islander  <input type="checkbox"/> European American/Caucasian  <input type="checkbox"/> Hispanic or Latino  <input type="checkbox"/> More than one Ethnic/Cultural Identity  <input type="checkbox"/> Unknown or not reported           </div>	
4. <input type="checkbox"/> Country of Origin: _____	

## 5. Marital Status:

- ☐ Single
- ☐ Married
- ☐ Divorced or Separated
- ☐ Widowed

## 6. Education:

- ☐ Less than high school
- ☐ High school grad or GED
- ☐ College
- ☐ Technical School
- ☐ Graduate School

## 7. Employment Status:

- ☐ Yes
- ☐ No

## 8. Health insurance:

- ☐ Yes
- ☐ No

## 9. Have you ever been told by a doctor that you have high blood pressure?

- ☐ Yes
- ☐ No

## 10. Are you on any blood pressure medications? Please list

- ☐ Yes: \_\_\_\_\_

☐ No

11. Have you ever been told by a doctor that you had a stroke? When? \_\_\_\_\_

☐ Yes

☐ No

12. Do you have heart disease or has a doctor even told you you have heart disease?

☐ Yes

☐ No

13. Have you ever been told by a doctor that you had a heart attack? When? \_\_\_\_\_

☐ Yes

☐ No

14. Do you have diabetes or has a doctor ever told you that you have diabetes/ high blood sugar?

☐ Yes

☐ No

15. Are you currently taking any diabetic/ high blood sugar medications? If yes please list

☐ Yes: \_\_\_\_\_

☐ No

16. Do you know if you have high blood cholesterol or has a doctor ever told you that you have high blood cholesterol?

☐ Yes

☐ No

17. Are you on any high blood cholesterol medications? Please list?

☐ Yes: \_\_\_\_\_

☐ No



18. Have you ever been told by a doctor that you had cancer? When? \_\_\_\_\_

☐ Yes

☐ No

19. Are you currently pregnant or plan to get pregnant in the following year?

☐ Yes

☐ No

20. Are you currently on dialysis?

☐ Yes

☐ No

Date Informed Consent Signed:

\_\_\_\_/\_\_\_\_/\_\_\_\_  
d d m m m y y y y

Investigator Signature: \_\_\_\_\_

\_\_\_\_/\_\_\_\_/\_\_\_\_  
d d m m m y y y y

Investigator Name: \_\_\_\_\_

## Appendix C. PRAISE Project SOC-13 Questionnaire

### The 13-item Sense of Coherence Questionnaire

Here is a series of questions relating to various aspects of your lives. Each question has seven possible answers. Please mark the number, which expresses your answer, with number 1 and 7 being the extreme answers. If the words under 1 are right for you, circle 1: if the words under 7 are right for you, circle 7. If you feel differently, circle the number which best expresses your feeling. Please give only one answer to each question.

1. Do you have feeling that you don't really care about what goes on around you?

1	2	3	4	5	6	7
Very seldom						very
often or never						

2. Has it happened in the past that you were surprised by the behaviour of people whom you thought you knew well?

1	2	3	4	5	6	7
Never happened						always
						happen
						ed

3. Has it happened that people whom you counted on disappointed you?

1	2	3	4	5	6	7
Never happened						always
						happen
						ed

4. Until now your life has had:

1	2	3	4	5	6	7
No clear goals						very
						clear
						goals
						and
Or purpose at all						purpos
						e

5. Do you have the feeling that you're being treated unfairly?

1	2	3	4	5	6	7
Very often						very
						seldom
						or
						never

6. Do you have the feeling that you are in an unfamiliar situation and don't know what to do?

1	2	3	4	5	6	7
Very often						very seldom or never

7. Doing the thing you do every day is:

1	2	3	4	5	6	7
A source of deep Pleasure and Satisfaction						a source of pain and boredom

8. Do you have very mixed-up feelings and ideas?

1	2	3	4	5	6	7
Very often						very seldom or never

9. Does it happen that you have feelings inside you would rather not feel?

1	2	3	4	5	6	7
Very often						very seldom or never

10. Many people – even those with a strong character – sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?

1	2	3	4	5	6	7
Never						very often

11. When something happened, have you generally found that?

1	2	3	4	5	6	7
You overesti-						you
mated or under-						saw
estimated its						things
importance						in the
						right
						proportion

12. How often do you have the feeling that there's little meaning in the things you do in your daily life?

1	2	3	4	5	6	7
Very often						very
						seldom
						or
						never

13. How often do you have feelings that you're not sure you can keep under control?

1	2	3	4	5	6	7
Very often						very
seldom						

**Appendix D. PRAISE Project General Health Questionnaire****GENERAL HEALTH HISTORY QUESTIONNAIRE:**

Thank you for taking this time to complete this health questionnaire. Please complete the following questions. Be sure to complete each question and if you are not sure about a question please pick one that most represent you.

**Diet & Exercise****1. How physically healthy are you?**

- ☐ Extremely healthy
- ☐ Very healthy
- ☐ Moderately healthy
- ☐ Slightly healthy
- ☐ Not at all healthy

**2. Do you take nutritional supplements?**

- ☐ Yes
- ☐ No

**3. How important is exercise to you?**

- ☐ Extremely important
- ☐ Very important
- ☐ Moderately important

☐ Slightly important

☐ Not at all important

**4. What do you most often do for exercise?**

☐ Lift weights

☐ Walk

☐ Run

☐ Hike

☐ Swim

☐ Dance

☐ Aerobics

☐ Pilates

☐ Play a team sport

☐ Other (please specify)

**5. Do you feel you get too much exercise, too little exercise, or about the right amount of exercise?**

☐ Much too much

☐ Somewhat too much

☐ Slightly too much

☐ About the right amount

☐ Slightly too little

☐ Somewhat too little

☐ Much too little

**6. In a typical day, how many of your meals or snacks include carbohydrates?**

**7. In a typical day, how many of your meals or snacks include protein?**

**8. In a typical day, how many of your meals or snacks include vegetables?**

**9. In a typical day, how many of your meals or snacks include fruit?**

10. In a typical day, how many microwavable or ready-made meals do you eat?

**Smoking History**

11. Which of the following people would you consider to be smokers? (Check all that apply)

☐

A person who smokes only when socializing

☐

A person who smokes only when drinking alcohol

☐

A person who smokes only after eating

☐

A person who smokes every day

☐

A person who smokes at least once a week but not every day

☐

A person who smokes at least once a month but not every

week

☐

A person who smokes at least once a year but not every

month

12. Does anyone in your household currently smoke cigarettes, or not?

☐

Yes, someone does

☐

No, no one does

☐

Not sure

13. Do you currently smoke cigarettes, or not?

☐

Yes, I do

☐

No, I do not

14. At what age did you start smoking cigarettes?

\_\_\_\_\_



15. About how many cigarettes do you smoke in a typical day?

\_\_\_\_\_

**General Health History**

16. Do you have a primary care doctor?

☐ Yes

☐ No

17. When was your last annual check up? \_\_\_\_\_

18. When was your last well woman check up? \_\_\_\_\_

☐ Not applicable

19. When was your last well man check up? \_\_\_\_\_

☐ Not applicable

20. When was the last time you had a complete metabolic panel?:

Blood work for your cholesterol and blood sugar:

\_\_\_\_\_

21. Do you currently know what your blood pressure number is normally?

☐ Yes, Please list \_\_\_\_\_

☐ No

22. Do you currently know what your heart rate and pulse is normally?

☐ Yes, Please list \_\_\_\_\_

☐ No

23. Have your doctor ever talk to you about your heart health?

☐ Yes

☐ No

## Appendix E. PRAISE Project Participants' Survey

### Participant's survey regarding the PRAISE program

1. The Health information taught me something I did not know
  - ☐ Strongly agree
  - ☐ Agree
  - ☐ Not sure
  - ☐ Disagree
  - ☐ Strongly disagree
2. The health information helped me consider changing my health habits
  - ☐ Strongly agree
  - ☐ Agree
  - ☐ Not sure
  - ☐ Disagree
  - ☐ Strongly disagree
3. The health information encouraged me to discuss a health concern with a family member
  - ☐ Strongly agree
  - ☐ Agree
  - ☐ Not sure
  - ☐ Disagree
  - ☐ Strongly disagree
4. The health information empowered me to take charge of my health
  - ☐ Strongly agree
  - ☐ Agree
  - ☐ Not sure
  - ☐ Disagree
  - ☐ Strongly disagree
5. The health information encouraged me to create a health plan
  - ☐ Strongly agree
  - ☐ Agree
  - ☐ Not sure
  - ☐ Disagree
  - ☐ Strongly disagree
6. Effectiveness of content delivery
  - ☐ Yes
  - ☐ No

**Participant's survey regarding the PRAISE program**

7. Time spent on content delivery
- ☐ Good
  - ☐ Not good
8. Duration of program
- ☐ Good
  - ☐ Not good
9. Overall how satisfied were you with this program?
- ☐ Very satisfied
  - ☐ Satisfied
  - ☐ Somewhat satisfied
  - ☐ Unsatisfied
10. Would you recommend this stroke health program to family members, friends, and, church members, and other churches in the area?
- ☐ Yes
  - ☐ No
11. If answered no to question 9, please indicate why

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## Appendix F. PRAISE Project Health Screening Consent

### Project PRAISE

### Health Screening Consent Form

My signature below means that I voluntarily agree to take part in this health screening. I, individually, and on behalf of my heirs, successors, assigns and personal representatives, hereby release, discharge and agree to indemnify and hold harmless Healthy Heritage and Project PRAISE and its employees, students, agents, volunteers, affiliates, officers, trustees and representatives from any and all liability whatsoever (including all liability arising directly or indirectly from the negligence of Project PRAISE and Healthy Heritage or its employees, students agents, volunteers, affiliates, officers, trustees or representatives) for any and all damages, losses or injuries (including death) I sustain to my person or property or both, including, but not limited to, any claims, demands, actions, causes of action, judgments, damages, expenses and costs, including attorneys' fees, which arise out of, result from, occur during or are in any way connected, directly or indirectly, with my participation in this healthcare screening or incident thereto. I further understand the following:

1. The results of this procedure will be made available to me immediately. This is the only copy that I will receive, unless I specifically request another copy.
2. If blood is obtained from a fingerstick, I understand that I may experience slight pain or a bruise at the puncture site.
3. The results obtained from the health screening(s) are preliminary and must be compared with other test results for proper interpretation.
4. The results of the test are to be interpreted by a qualified physician or health care provider, taking into consideration my personal medical history.
5. It is solely my responsibility to seek any follow-up or to carry out any other recommendations or advice regarding these results.
6. If data is collected using results from this health screening, my identity and individual results will not be revealed, except for research purposes when an institutional review board that has reviewed the research proposal and established protocols to ensure the privacy of my information has approved the research.
7. I acknowledge that I have received a copy of Healthy Heritage and Project PRAISE in regard to HIPAA.

Before signing this form, I read it or had it read to me. I understand what it says. I have had a chance to ask questions about the form. In response to any questions I have asked, I have received answers that I understand. I have received a copy of this form (if requested).

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_ Circle: Male / Female

Address: \_\_\_\_\_ City/State/Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Do you have an allergy to LATEX? Circle: YES / NO

Physician's Name: \_\_\_\_\_ Physician's Phone Number: \_\_\_\_\_

## Appendix G. PRAISE Project HIPAA Form

### Project PRAISE

### Notice of Privacy Practices

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This notice describes how medical information about you may be used and disclosed and how you can get access to this information. Project PRAISE through Healthy Heritage is required by law to maintain the privacy of Protected Health Information (PHI) and to provide individuals with this notice. This Notice of Privacy Practices describes how we may use and disclose PHI to carry out treatment or health care operations that are permitted or required by law. This Notice of Privacy Practices also describes your rights with respect to PHI about you. Project PRAISE through Healthy Heritage will comply with these terms and will not use or disclose PHI about you without your written authorization, except as described in this Notice of Privacy Practices. We reserve the right to change our practices and this Notice of Privacy Practices and to make the new Notice of Privacy Practices effective for all PHI we maintain. Upon request, we will provide any revised Notice of Privacy Practices to you.

You have the following rights regarding the PHI about you:

1. Obtain a paper copy of the Notice of Privacy Practices upon request
2. Request a restriction on certain uses and disclosures of PHI
3. Inspect and obtain a copy of PHI
4. Request an amendment of PHI

Examples of how we may use and disclose PHI about you:

1. We may communicate with individuals involved in your care.
2. We may make health-related communications about treatment alternatives or other health-related benefits and services that may be of interest to you.
3. We may disclose PHI about you when required to do so by law.
4. We may use and disclose PHI about you when necessary to prevent a serious threat to your health and safety or the health and safety of the public or another person.
5. We may use or disclose PHI about you to notify or assist in notifying a person responsible for your care, such as a family member or personal representative, regarding your location or general condition.
6. We may disclose PHI about you to researchers when an institutional review board that has reviewed the research proposal and established protocols to ensure the privacy of your information has approved their research.

Other uses and disclosures of PHI:

Project PRAISE, through Healthy Heritage will obtain your written authorization before using or disclosing PHI about you for purposes other than those provided for in this Notice of Privacy Practices, unless otherwise permitted or required by law. You may revoke an authorization in writing at any time. Upon receipt of the written revocation, we will stop using or disclosing PHI about you, except to the extent that we have taken action in reliance on the authorization, prior to its revocation.

For more information or to report a problem:

If you have questions you may contact Darling Paul-Richiez at [darlingrichiez@gmail.com](mailto:darlingrichiez@gmail.com). If you believe your privacy rights have been violated, you can file a complaint with the Secretary of Health and Human Services. (<http://www.hhs.gov/ocr/privacy/hipaa/complaints/index.html>). There will be no retaliation for filing a complaint.

## Appendix H. PRAISE Project Learning Sessions-Course Outline

### Project PRAISE Learning Sessions

#### Session 1– Introduction to PRAISE (Promotion Recognition Advocacy in Stroke Education) .....

- A. Retreat kickoff-Motivational Speech
- B. Body measurement
  - 1. Weight
  - 2. Height
  - 3. Body fat measure
  - 4. Waist, neck, leg, and arm measurement
- C. Vital measurement
  - 1. Blood pressure
  - 2. Heart rate
  - 3. Blood glucose
  - 4. Lipid profile

#### Session 2 – Awareness and Advocacy Lead To Big Change..... Health Advocacy Upstream Causes

- A. Introduction to health
- B. Lessons in advocacy
- C. Food availability and chronic diseases
- D. Community assets and barriers; social ties; networking; the Church as resource
- E. Understanding health and social advocacy

#### Session 3 – Strategies for Self-empowerment and Self-advocacy .....

- A. Understanding empowerment and advocacy
- B. Understanding what it's all about
- C. Understanding my rights and responsibilities
- D. Increasing my self-awareness
- E. Creating a health plan
- F. Advocating for your need
- G. Developing and creating social ties and network

#### Session 4 – Mobilizing your generalize resistance resources One Day at a Time.....

#### Session 5 – Stroke Overview.....

##### Stroke Basic Part 1 .....

- A. What is stroke
- B. How common is stroke
- C. Causes of Stroke
- D. Stroke vs. TIA vs. MI
- E. Stroke warning signs
  - FAST scale
  - CPRS scale

- Body language-AHA movie clips
  - Stroke video story
  - Stroke YouTube of recent incidence of lady
- Stroke Diagnostics Part 2 .....
- A. CT and CTA
- B. Echocardiogram
- C. Holter Monitor
- D. MRI and MRA
- TEE
- Session 6      Stroke Treatment Part 3.....
- A. Stroke emergency treatment
- B. Stroke Medical Treatment
- C. Stroke Surgical Treatment
- Stroke Health Promotion Part 4 .....
- A. Blood Pressure Control
- B. Weight Management and Healthy Nutrition
- C. Cholesterol management
- D. Smoking Facts
- E. Diabetes control and promotion
- Session 7 – Hidden Truths: Reading and Understanding Food labels.....
- A. Nutrition 101
- B. Back to basic
- Session 8 – Community Resources to Healthier Options. ....
- A. Cooking with locally grown produce
- B. Cooking demonstration
- Session 9 – Lets get physical.....
- A. Available physical activity resources in the community for staying active
- B. One hour a day keep the doctor away
- Session 10 – Partner With Your Health Care Provider .....
- A. Navigating the healthcare system
- B. Creating a Vial of Life
- Session 11– Get Your Family, Friends, and church family Involved.....
- A. Using the built environment in getting physical
- B. Simple home exercise
- C. Staying physical at work
- Session 12 – Giving PRAISE.....



## Appendix I. Stakeholder's Letter

### THE CHURCH'S COMMITMENT TO HEALTH PROMOTING ACTIVITIES

JUST AS THE CHURCH NOURISHES OUR SPIRIT – WE MUST ALSO  
NOURISH OUR BODIES.

“Whether therefore  
ye eat or drink,  
or whatsoever ye  
do, do all unto  
the glory of God.”

(1 Corinthians 10:31)

“Do you not know that  
your body is a temple  
of the Holy Spirit who  
is in you, whom you  
have received from  
God?”

(1 Corinthians 6:19)

All members of \_\_\_\_\_ (name of church)  
have a responsibility to care for their bodies as temples of God. Healthy minds and  
spirits need healthy bodies, healthy diets, regular physical activity, and preventive  
medical care.

Therefore, \_\_\_\_\_ (name of church)  
will participate in the PRAISE: Promotion Recognition Advocacy in Stroke Education  
program. Our goal is to improve stroke health promoting activities of participants  
by rallying community-based partners and improving the provision of  
collaborative efforts that offer resources for stroke health promotion. PRAISE  
aims to improve knowledge, awareness, and stroke outcomes for African  
Americans in Riverside County via a faith-based asset approach, by harnessing the  
resources of the church and the faith-based health promoting organization. This  
will be done through advocacy and empowerment. This will be a collaborative  
effort that includes a locally connected faith-based health promoting organization,  
community health workers, pastors and first ladies of the church, certified  
dietician and nutritionist, a certified physical fitness trainer, a trained chef, a  
registered nurse, and a motivator.

The PRAISE program will consist of:

- A kick-off retreat \_\_\_\_\_ (date)
- Free health screening
- Activities that teach empowerment and advocacy
- Activities that teach about stroke, stroke risks, stroke management and  
treatments, and stroke health promoting activities
- Nutrition and dietary education
- Opportunities to try locally grown organic fruits and vegetables at the church
- Cooking lessons and tips utilizing locally grown produce
- 30 minutes physical activity and physical education

The church commits to establishing and maintaining a Planning Team to plan and  
manage these activities. The Team will be coordinated by \_\_\_\_\_  
\_\_\_\_\_. (Name of coordinator)

The church's mission is soul salvation (Matthew 28:19-20, Romans 10:9-10). We must  
also focus on our bodies.

-----  
Signature of Pastor



## Appendix J. Post-program Group Interview

### Project PRAISE

### Post-program Debriefing Questionnaire (semi-structured)

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- What are some of the reasons that made you signed up for this program?
- What did you like best about this program?
- What did you find most useful?
- What did you like least about this program?
- What did you find least useful?
- What is your confidence level in managing stroke risks after taking this program?
- How likely do you think that you will adopt what you have learned to your daily routine, your community, and your family?
- How would you describe your ability in recognizing stroke signs and symptoms and taking the appropriate action as a result of this program?
- Would you recommend this program to other participants and other members of the church? If so, why?
- How would you describe your ability to navigate the healthcare system as a result of this program?
- How would you describe your awareness of local resources as a result of this program?
- How would you describe the overall impact of this program on your general health?
- What do you see as the most challenging when it comes to cardiovascular health promoting activities?
- What are your recommendations for future programs such as this?

## Appendix K. Stroke Awareness Questionnaire (SAQ)

### PRAISE: Promotion Recognition Advocacy in Stroke Education

#### Stroke Awareness Questionnaire (SAQ)

Hello, my name is \_\_\_\_\_. I am conducting a short survey on behalf of the Healthy Heritage Movement and the PRAISE Program about the medical condition of stroke. We are interested to know your views about stroke.

I can assure you of the complete confidentiality of the information you provide. Your participation is completely voluntary and anonymous. You do not have to answer any question that you do not want to and you can end the interview at any time.

Before we start, I would like to ask if you yourself, or someone close to you has experienced a stroke recently (i.e. in the past 6-12 months)?

Yes ☐1

No ☐2-

**Note to interviewer: Unless otherwise specified, please read ALL possible answers to the participant and mark their answer(s), the only exception is for yes/no questions.**

#### *Section A: Knowledge and Views of Stroke*

Parahoo et al., (2003)

**A1. Can you tell me what you understand by a “stroke”? (NOTE: Do not read any answers. Please mark the answer closest to what the participant states.)**

Blood clot in the brain ☐1

Brain haemorrhage ☐2

A condition that affects the brain ☐3-[i.e., don't specify clot/hemorrhage]

Circulation problem in the brain ☐4

Don't know ☐5

Other ☐6

Yoon et al., (2001)

**A2. Do you know what a “transient ischemic attack” (TIA) is?**

Mini/small/minor stroke ☐1

Other ☐2

No ☐3

If no, please tell the participant that a TIA is “a mini/small stroke”

Pancioli et al., (1998) [Rephrased]

**A3. What do you believe are the risk factors associated with stroke? By risk factors, I mean anything that increases a person's chances of having a stroke. Try to tell me as many as you can. (NOTE: Do not read any answers. Please mark the answers that the participant gets correct and note any additional ones)**

Stress ☐1

High blood pressure ☐2

High cholesterol ☐3

Smoking ☐4

Diabetes ☐5

Overweight ☐6

Drinking alcohol ☐7

Lack of exercise ☐8

Increasing age ☐9

Hereditary-family history ☐10

Other answers ☐11 – please specify:

---

---

---

Don't know ☐12

**A4. Can you estimate how many people have a stroke in the US each year? DO NOT READ OUT**

1,000 ☐1

1,000-5,000 ☐2

5000-10,000 ☐3

10,000-20,000 ☐4

More than 20,000 ☐5

Don't know ☐6

**A5. Can you estimate how many people have a stroke in Riverside County each year? DO NOT READ OUT**

1,000 ☐1

1,000-5,000 ☐2

5000-10,000 ☐3

10,000-20,000 ☐4

More than 20,000 ☐5

Don't know ☐6

**A6. Of everyone in the US and Riverside County who has a stroke, can you estimate what percentage is under the age of 65? \_\_\_\_\_ Record Actual**

Pancioli et al., (1998) [Rephrased]

**A7. What do you think are the symptoms or warning signs of a stroke? Try to tell me as many as you can.**

**(NOTE: Do not read any answers. Please mark the answers that the participant gets correct and note any additional ones)**

Dizziness ☐1

Difficulty understanding/sudden confusion ☐2

Severe headache ☐3

Problems with vision ☐4

Shortness of breath ☐5

Slurred speech ☐6

Weakness on one side of the body ☐7

Facial Weakness/Fallen Face ☐7

Any mention Face, Arm, Speech, Time (FAST) ☐7

Numbness on one side of the body ☐8

Other answers ☐9 – please specify:

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---

Don't know ☐10

**A8. How serious do you think the following conditions are? Please rate these conditions on a scale of 1 to 5, 1 being not very serious, 5 being worst imaginable condition. (Please circle the participant's responses).**

	Condition	Not very serious	Quite serious	Very serious	Extremely serious	Worst imaginable condition
A7(1)	Stroke	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
A7(2)	Heart Attack	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
A7(3)	Dementia/Alzheimer's	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
A7(4)	Diabetes	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
A7(5)	Arthritis	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
A7(5)	Cancer (Breast for female respondent/Prostate for male respondent)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
A7(6)	Transient Ischemic Attack (mini stroke)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

***Section B: Response to Stroke***

Adapted from Blades et al., (2005)

**B1. What is the first thing that you would do if you thought that you were having a stroke? (NOTE: Do not read any answers. Please mark the answer given by the participant)**

A. Wait and see, for example lie down, try to relax, ignore it ☐1 → **Go to Question B2**

- B. Tell someone, for example a family member, friend, or neighbor ☐2 → **Go to Question B2**
- C. Take something, for example aspirin or a headache medication ☐3 → **Go to Question B2**
- D. Contact my primary provider ☐4 → **Go to Question B3**
- E. Drive or have someone drive me to the hospital ☐5 → **Go to Question B3**
- F. Call an ambulance ☐6 → **Go to Question B3**
- G. Don't know ☐7 → **Go to Question B3**
- H. Other answers ☐8 – please specify: → **Go to Question B3**
- 
- 

Adapted from Blades et al., (2005)

**B2. What would you do next, in other words, the second thing that you would do?**

- A. Wait and see, for example lie down, try to relax, ignore it ☐1
- B. Tell someone, for example a family member, friend, or neighbor ☐2
- C. Take something, for example aspirin or a headache medication ☐3
- D. Contact my primary care provider ☐4
- E. Drive or have someone drive me to the hospital ☐5
- F. Call an ambulance ☐6
- G. Don't know ☐7
- H. Other answers ☐8 – please specify:
- 
- 

**B3. Have you recently seen any TV advertisements about stroke?**

Yes ☐1

No ☐2

Don't know ☐3

**If “yes”, please specify**

FAST advertisement ☐1

Advertisement depicting man/woman with fire burning on their forehead ☐2

None of the above ☐3

*Section C: Recovery and Secondary Prevention*

Next, I would like to ask you some questions about what you think happen after a person has a stroke for the first time.

Yoon et al., (2001)

**C1. If a person experiences a stroke do you think it is possible to reduce the extent and effects of the stroke by using certain forms of medical treatment within a few hours of their stroke?**

Yes ☐1

No ☐2 → Go to Question C3

Don't know ☐3 → Go to Question C3

Adapted from Yoon et al., (2001)

**C2. Can you name any of these medications or other treatments? (Do not read any answers. Please mark the answers as appropriate; participant can list multiple answers)**

Aspirin ☐1

Blood thinning drugs such as heparin or warfarin ☐2

Thrombolysis/Clot busting drugs ☐3

Blood pressure control ☐4

Surgery ☐5

Natural therapies ☐6

Heart massage (CPR) ☐7

Other answer ☐8

---

Don't know ☐9

Yoon et al., (2001)

**C3. Out of 100 American people who have had a stroke, how many do you think will make a full recovery? \_\_\_\_\_**

Adapted from Yoon et al., (2001)

**C4. Out of 100 American people who have had a stroke, how many do you think will die within a month as a**

result of stroke? \_\_\_\_\_

**C5. Do you think more women or more men die from stroke?**

More women ☐1

More men ☐2

No difference ☐3

Yoon et al., (2001)

**C6. How likely do you think it is that a person would have a stroke if they have already had one?**

A lot less likely ☐1

Less likely ☐2

The same ☐3

More likely ☐4

A lot more likely ☐5

Yoon et al., (2001)

**C7. Do you think after a person has had a stroke that it is possible to reduce the risk of further stroke by using certain forms of medical treatment?**

Yes ☐1

No ☐2 → Go to Question C9

Don't know ☐3 → Go to Question C9

Adapted from Yoon et al., (2001)

**C8. Can you name what any of these treatments might be? (Do not read any answers. Please mark the answers as appropriate; participant can list multiple answers).**

Aspirin ☐1

Blood pressure control ☐2

Blood thinning such as Warfarin ☐3



Good control of Diabetes ☐4

Reduction in cholesterol level ☐5

Other medication ☐6

Rehabilitation ☐7

Diet therapy/Adopting a healthier diet ☐8

Natural (Alternative/Complementary) therapy ☐9

Other Answers ☐10 (please specify)

---

Don't know ☐11

**C9. Can you name any impairments or disabilities that a person may experience as a result of having a stroke? (Do not read any answers. Please mark the answers as appropriate; participant can list multiple answers).**

Weakness on one side of the body ☐1

Problems with speech ☐2

Problems with vision ☐3

Confusion; problems with thinking/memory ☐4

Difficulty with use of arms or legs ☐5

Other Answers ☐6 (please specify)

---

Don't know ☐7

**C10. Can you name any of the services or supports that might reduce the effects of these impairments or disabilities for a person with stroke? (Do not read any answers. Please mark the answers as appropriate; participant can list multiple answers).**

Physiotherapy ☐1

Speech therapy ☐2

Occupational therapy ☐3

Psychological therapy ☐4

Other Answers ☐5 (please specify)

Don't know ☐6

**C11. On a scale of 1 to 5, how would you rate the standard of stroke care within the US health service, where 1 means extremely inadequate and 5 means a world class service:**

Extremely inadequate ☐1

Inadequate ☐2

Neither ☐3

Adequate ☐4

World class ☐5

Don't Know ☐6

**Section D: Medical History**

**I would now like to ask you some questions relating to your own health**

**European Health Interview Survey (EHIS), SLÁN 07**

**D1. Have you ever had/Do you have any of the following conditions?**

**If yes, was this in the last 12 months? (Note: If the participant stated that they had a stroke in the previous section, do not ask again)**

	Ever?		If yes, was this in the last 12 months?	
	Yes	No	Yes	No
D1(1) Stroke	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2
D1(2) Heart Attack	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2
D1(3) Angina	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2
D1(4) Transient Ischemic Attack (TIA)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2
D1(5) Diabetes	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2

**Adapted from NIHSWS 2005/06, BRFSS 2007, NHANES 2005/06**

**D2. Have you ever been told by a doctor or nurse that you have one of the following conditions? Are you still taking medicine, tablets or pills for this condition?**

Condition	Ever diagnosed?			Currently being treated	
	Yes	No		with medicine	
		(only during pregnancy)		Yes	No
D2(1) High Blood Pressure	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
D2(3) High Cholesterol	<input type="checkbox"/> 1	n/a	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2
D2(3) Abnormal Heart Rhythm (Atrial fibrillation)	<input type="checkbox"/> 1	n/a	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 2

SLÁN 07

**D3. Have you yourself ever smoked at least 100 cigarettes in your entire life? [5 packs =100 cigarettes]**

Yes ☐1      No ☐2 → Go to Section E

SLÁN 07

**D4. Do you now smoke every day, some days or not at all?**

Every day ☐1      Some days ☐2      Not at all ☐3

**Section E: Demographic Information**

**Lastly, I would like to ask you some questions about yourself.**

SLÁN 07

**E1. Record person's gender:**      M ☐1      F ☐2

SLÁN 07

**E2. Can I ask, what is your age? \_\_\_\_years**

SLÁN 07

**E3. Would you describe the place where your household is situated as being:**

A city ☐1

A town or built-up area (1,500+) ☐2

A village or rural area ☐3

Open country ☐4

**E.4 In order that we interview a cross-section of people from all walks of life, could you tell me the occupation of the chief wage earner?**

INTERVIEWER - WRITE DOWN THE OCCUPATION, ASK ALL THE APPROPRIATE QUESTIONS TO CLASSIFY THE ANSWER, IF THE RESPONDENT IS A FARMER : ASK HOW MANY ACRES THEY HAVE THEN CODE 1 TO CONTINUE.

SLÁN 07

**E5. What is your current marital status? (Not necessary to read answers to participants)**

Single ☐1

Cohabiting ☐2

Married ☐3

Separated ☐4

Divorced ☐5

Widowed ☐6

**E6. Are you covered by a medical card?**

Yes – full medical card ☐1 Yes – hospital only medical card ☐2 No ☐3

**E7. If at some future date we wanted to talk to you further about stroke, may we contact you to see if you are willing to help us again? You would of course be free to take part or not at that time.**

Yes ☐1 No ☐2 .....

**Thank you for taking the time to answer our questions. You have been very helpful.**

**Appendix L. SF36 Health Survey**

## SF36 Health Survey

<b>INSTRUCTIONS:</b> This set of questions asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. Answer every question by marking the answer as indicated. If you are unsure about how to answer a question please give the best answer you can.				
1.	In general, would you say your health is: (Please tick one box.)			
	Excellent	<input type="checkbox"/>		
	Very Good	<input type="checkbox"/>		
	Good	<input type="checkbox"/>		
	Fair	<input type="checkbox"/>		
	Poor	<input type="checkbox"/>		
2.	Compared to one year ago, how would you rate your health in general <u>now</u> ? (Please tick one box.)			
	Much better than one year ago	<input type="checkbox"/>		
	Somewhat better now than one year ago	<input type="checkbox"/>		
	About the same as one year ago	<input type="checkbox"/>		
	Somewhat worse now than one year ago	<input type="checkbox"/>		
	Much worse now than one year ago	<input type="checkbox"/>		
3.	The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much? (Please circle one number on each line.)			
	<u>Activities</u>	Yes, Limited A Lot	Yes, Limited A Little	Not Limited At All
3(a)	Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	1	2	3
3(b)	Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	1	2	3
3(c)	Lifting or carrying groceries	1	2	3
3(d)	Climbing several flights of stairs	1	2	3
3(e)	Climbing one flight of stairs	1	2	3
3(f)	Bending, kneeling, or stooping	1	2	3
3(g)	Walking more than a mile	1	2	3
3(h)	Walking several blocks	1	2	3
3(i)	Walking one block	1	2	3
3(j)	Bathing or dressing yourself	1	2	3
4.	During the <u>past 4 weeks</u> , have you had any of the following problems with your work or other regular daily activities <u>as a result of your physical health</u> ? (Please circle one number on each line.)			
		Yes	No	
4(a)	Cut down on the amount of time you spent on work or other activities	1	2	
4(b)	Accomplished less than you would like	1	2	
4(c)	Were limited in the kind of work or other activities	1	2	
4(d)	Had difficulty performing the work or other activities (for example, it took extra effort)	1	2	
5.	During the <u>past 4 weeks</u> , have you had any of the following problems with your work or other regular daily activities <u>as a result of any emotional problems</u> (e.g. feeling depressed or anxious)? (Please circle one number on each line.)			
		Yes	No	
5(a)	Cut down on the amount of time you spent on work or other activities	1	2	
5(b)	Accomplished less than you would like	1	2	
5(c)	Didn't do work or other activities as carefully as usual	1	2	

6. During the <u>past 4 weeks</u> , to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups? (Please tick one box.) Not at all <input type="checkbox"/> Slightly <input type="checkbox"/> Moderately <input type="checkbox"/> Quite a bit <input type="checkbox"/> Extremely <input type="checkbox"/>																																																																												
7. How much <u>physical</u> pain have you had during the <u>past 4 weeks</u> ? (Please tick one box.) None <input type="checkbox"/> Very mild <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> Very Severe <input type="checkbox"/>																																																																												
8. During the <u>past 4 weeks</u> , how much did <u>pain</u> interfere with your normal work (including both work outside the home and housework)? (Please tick one box.) Not at all <input type="checkbox"/> A little bit <input type="checkbox"/> Moderately <input type="checkbox"/> Quite a bit <input type="checkbox"/> Extremely <input type="checkbox"/>																																																																												
9. These questions are about how you feel and how things have been with you <u>during the past 4 weeks</u> . Please give the one answer that is closest to the way you have been feeling for each item. (Please circle one number on each line.) <table border="1"> <thead> <tr> <th></th> <th>All of the Time</th> <th>Most of the Time</th> <th>A Good Bit of the Time</th> <th>Some of the Time</th> <th>A Little of the Time</th> <th>None of the Time</th> </tr> </thead> <tbody> <tr> <td>9(a) Did you feel full of life?</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>9(b) Have you been a very nervous person?</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>9(c) Have you felt so down in the dumps that nothing could cheer you up?</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>9(d) Have you felt calm and peaceful?</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>9(e) Did you have a lot of energy?</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>9(f) Have you felt downhearted and blue?</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>9(g) Did you feel worn out?</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>9(h) Have you been a happy person?</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>9(i) Did you feel tired?</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> </tbody> </table>								All of the Time	Most of the Time	A Good Bit of the Time	Some of the Time	A Little of the Time	None of the Time	9(a) Did you feel full of life?	1	2	3	4	5	6	9(b) Have you been a very nervous person?	1	2	3	4	5	6	9(c) Have you felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	6	9(d) Have you felt calm and peaceful?	1	2	3	4	5	6	9(e) Did you have a lot of energy?	1	2	3	4	5	6	9(f) Have you felt downhearted and blue?	1	2	3	4	5	6	9(g) Did you feel worn out?	1	2	3	4	5	6	9(h) Have you been a happy person?	1	2	3	4	5	6	9(i) Did you feel tired?	1	2	3	4	5	6
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11. How TRUE or FALSE is <u>each</u> of the following statements for you? (Please circle one number on each line.) <table border="1"> <thead> <tr> <th></th> <th>Definitely True</th> <th>Mostly True</th> <th>Don't Know</th> <th>Mostly False</th> <th>Definitely False</th> </tr> </thead> <tbody> <tr> <td>11(a) I seem to get sick a little easier than other people</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>11(b) I am as healthy as anybody I know</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>11(c) I expect my health to get worse</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>11(d) My health is excellent</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> </tbody> </table>								Definitely True	Mostly True	Don't Know	Mostly False	Definitely False	11(a) I seem to get sick a little easier than other people	1	2	3	4	5	11(b) I am as healthy as anybody I know	1	2	3	4	5	11(c) I expect my health to get worse	1	2	3	4	5	11(d) My health is excellent	1	2	3	4	5																																								
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Thank You!

**Appendix M. PRAISE Budget and Budget Justification**

<b>Project PRAISE Budget &amp; Budget Justification</b>		
<b>Personnel</b>		
<b>Staff Name</b>	<b>Position Title</b>	<b>Amount</b>
**Phyllis Clark	Executive Director-oversee the day-to-day operation of the program and facilities. Attend required meetings. Assist student with making connection with the HMA and church members. With an annual salary of \$62,500 at total FTE of .30 or 30.00% FTE time for direct delivery duties. Executive Director's time is on a volunteer basis	0.00
**Darling Richiez, DNPc, MSPH, CHES, RN, PHN	Program Manager (Primary Investigator)- Administer the nutrition education grant agreement and budget, supervise nutrition education staff, attend work-related meetings, and monitor program implementation. Coordinate grant-reporting requirements. Program Coordinator- Plan and facilitate nutrition education activities for programming in faith-based, church setting for congregants, community farmers' market shoppers. Prepare instructional plans for nutrition activities, collect data related to nutrition education programming, prepare documentation for nutrition education grant agreement, and prepare interim and final progress report. Attend required meetings. 100% percent of time were volunteered and considered as in kind donation.	0.00
**Community Health Worker (TBA) Volunteer	Assisted in facilitating DNP student to HMA, act as a key informant within the community. Will assist with scheduling project sessions and coordinating project between the church and DNP student.	0.00
HMA Staffs	Assisted DNP students in screening of participants; accu-check, blood pressure check, HR and pulse, height and weight. Also assist in pre and post data collection as well as completing demographic forms and surveys. All HMA volunteers have been trained on Responsible Conduct of Research (RCR) and Human Subjects Research.	
<b>Total Personnel &amp; Fringe</b>		<b>0.00</b>
<b>Operating Expenses</b>		
<b>Budget Item</b>	<b>Description/Justification</b>	
General Office Supplies	General office supplies: such as pens, paper, markers, flip charts, folders, etc. \$50 x 12 x .55 FTE = \$330	330
Printing & Duplication	<b>Printing and duplication:</b> Nutrition and physical activity related flyers and other materials for participants, families, and teachers through out the 12 weeks – approximately 1,000 copies @ .04/copy = \$40	40
Equipment	Anthropometric tools, Digital camera, heart and blood vessel	626.08

	models, storage of educational materials	
	<ul style="list-style-type: none"> <li>Heart and Brain Pathology Anatomical Model Shows Left Heart Failure and Stroke</li> </ul>	68.95
	<ul style="list-style-type: none"> <li>Human Brain Arteries, Medical Body Model, Anatomical Organs, Anatomy Science</li> </ul>	53.72
	<ul style="list-style-type: none"> <li>Zocor Heart and Artery Model produced by Merck and Co. Inc.</li> </ul>	50.97
	<ul style="list-style-type: none"> <li>4-Stage Artery Model w/ Display and 100 Handouts ~ Normal-Stenosis</li> </ul>	27.49
	<ul style="list-style-type: none"> <li>GPI Type II Diabetes Set #4010 with CHART stroke pathology heart disease kidney</li> </ul>	124.95
	<ul style="list-style-type: none"> <li>CardioChek PA Silver Bundle Printer 2161</li> </ul>	200.00
	<ul style="list-style-type: none"> <li>Blood Pressure cuffs**</li> </ul>	20.00
	<ul style="list-style-type: none"> <li>Stethoscopes**</li> </ul>	120.00
	<ul style="list-style-type: none"> <li>Blood testing strips</li> </ul>	300.00
	<ul style="list-style-type: none"> <li>Blood collection capillary tubes</li> </ul>	20.00
	<ul style="list-style-type: none"> <li>Lancets**</li> </ul>	15.00
	<ul style="list-style-type: none"> <li>Alcohol wipes**</li> </ul>	15.00
	<ul style="list-style-type: none"> <li>2X2**</li> </ul>	15.00
	<ul style="list-style-type: none"> <li>Sharp container**</li> </ul>	6.95
	<ul style="list-style-type: none"> <li>Weight Scale**</li> </ul>	50.00
Program Delivery Staff	Key personnel in the delivery of the educational program	1050
Contractual-sub-grantees	<b>Registered Nurse (DNP student)</b> – TBD – Provides nutrition education to the population. Specific duties include: Delivery of general nutrition education in a classroom or group setting, staffing health fairs and other community or promotional events where nutrition education messages are delivered, distribution of nutrition education materials, maintaining program reports. Deliver educational content of lesson plans.	



	<p><b>Certified Chef- TBD-</b> will provide SNAP approve education on easy and healthy cooking using locally grown cost effective vegetables and fruits as well as using WIC to purchase fruits and vegetables.</p> <p><b>Certified Physical Educator-TBD-</b> This person will provide physical education that is tailored and targeted for maximum impact and using one's environment to say fit and active. Will obtain pre and post intervention body fat composition.</p> <p><b>Motivator-TBD-</b>This person will kickoff nutritional and physical education program by empowering faith base population to take action personally and as a community, as well as empower them to use the faith base community as a form of social support and network.</p> <p>Approximately 15 hours x \$35 an hour = \$525.00 X 2 staff</p>	
	<b>Total Operating Expenses</b>	<b>2006.08</b>
<b>Travel and Per Diem</b>		
<b>Budget Item</b>	<b>Description/Justification</b>	
Travel	Travel expenses for staff to travel to educational training, health fairs and events and any business conducted outside the main office. Federal per diem \$ 0.50 @ 300 miles will be reimbursed for traveling beyond the City of Riverside.	150.00
	<b>Total Travel and Per Diem</b>	<b>150.00</b>
<b>Other Costs</b>		
<b>Budget Item</b>	<b>Description/Justification</b>	
Food for demonstration	<b>Food Samples:</b> Healthy Heritage will purchase food and paper supplies for taste-testing and demonstrations for nutrition education classes and presentations: \$2.50/sample x 2 sites x 12 lessons/site x 20 students/lesson = \$1,200	1250.00
Small Wares	<b>Small Wares</b> to conduct food demonstrations such as toaster oven, crockpot, griddle, measuring cups/spoons, bowls, cutting boards, blenders, etc.	200.00
Nutrition education materials	<b>Nutrition education materials:</b> Such as books, handouts, etc., required for the delivery of critical program services, not to exceed \$4 per item.	50.00
	Approximately 50 items @ \$1/each = \$50	
	<b>Total Other Costs</b>	<b>1500.00</b>
	<b>Total Costs:</b>	<b>3656.08</b>
	<b>Indirect Cost @ 5.00% of total direct cost</b>	<b>182.80</b>
	<b>Total Costs:</b>	<b>3838.88</b>

**Appendix N. PRAISE Goals, Objectives and Outcome Indicators**

<b>Appendix N. Evaluation Indicators and Data Collection Methods/Sources</b>			
<b>Program Goals</b>	<b>Program Components</b>	<b>Indicators</b>	<b>Data Collection Methods/Sources</b>
<p>Improve cardiovascular health promoting activities of participants</p> <p>Improve access and equity in quality cardiovascular health care services among African Americans in Riverside County</p> <p>Improve stroke outcome among African Americans within Riverside County</p>	<p>1. Participants Knowledge, Attitude, and Beliefs (KAB) Increases</p>	<p>70%+ increase in the proportion of participants who are aware of the early warning symptoms and signs of a stroke and the importance of accessing rapid emergency care by calling 911 or another emergency number by the end of program implementation. Healthy People 2020 recommendation: 56.4%</p> <p>70%+ increase in the proportion of participants who are aware of the early warning symptoms and signs of a stroke by the end of program implementation. Healthy People 2020 recommendation: 59.3%</p> <p>95%+ increase in the proportion of participants who are aware of the importance of accessing rapid emergency care for a stroke by calling 911 or another emergency number by the end of program implementation. Healthy People 2020 recommendation: 94.7</p> <p>70%+ of all participants will show an increase in knowledge of modifiable stroke risk factors and will be able to state steps in reducing those risks by the end of</p>	<p>Group interview questionnaire</p> <p>Pre and Post program test</p> <p>Surveys</p>

		<p>program implementation.</p> <p>70%+ increase of participants with high blood pressure/hypertension were taking the prescribed medications to lower their blood pressure within 2 weeks of program implementation. Healthy People 2020 recommendation: 63.2%</p> <p>70%+ increase of participants with elevated LDL cholesterol who have been advised by a health care provider regarding cholesterol-lowering management, including lifestyle changes and, if indicated, medication; nutrition, physical activities, weight management, and drug therapy within 2 weeks of program completion</p>	
	2. Participants Motivation Increases	<p>70% + of all participants intent to manage their cholesterol will increase by the end of program implementation</p> <p>70%+ of all participants intent to manage their blood pressure will increase by the end of program implementation</p> <p>82%+ of all participants intent to check their blood cholesterol level and know their risk on a routine basis will increase within two weeks of post program</p>	<p>Surveys</p> <p>Group interview</p>

		<p>implementation</p> <p>93%+ of all participants intent to check their blood pressure and can state whether their blood pressure was normal or high will increase by the end of program implementation</p> <p>93%+ of all participants with prehypertension/hypertension who meet the recommended guidelines: who have an intent to decrease in BMI, saturated fat consumption, sodium intake, an increase in physical activity, and moderate alcohol consumption by the end of program implementation</p> <p>70%+ of all participants intent to quit smoking will increase within two weeks post program implementation</p> <p>70%+ of all participants intent in creating and establishing a partnership with their primary care provider will increase within two weeks post program implementation</p>	
	<p>3. Participants receive and use resources available in the community in promoting healthy choices.</p>	<p>50%+ of participants who receive community resources; cook books, and free guides to health promoting activities will report use of them by the end of program implementation</p> <p>50%+ of participants who receive “Vial of Life” form will report use by the end of</p>	<p>Group Interview</p> <p>Surveys</p>

		<p>program implementation</p> <p>50%+ of participants who receive instruction, information, and durable power of attorney for health care forms will report use by the end of program implementation</p> <p>50%+ of all participants will state and report use of locally grown organic and affordable fruits and vegetables in the community by the end of program implementation</p>	
	4. Increase participants sense of coherence	<p>100% of participants will understand how resources (goods/services/people) and policies impact health-promoting activities, which can lead to poor health by the end of program implementation</p> <p>100% of Participants will write a letter to their local civic leaders, government officials and/or school administrators to express their concern about stroke issues facing their community and suggest how it could be addressed, especially via faith-based advocacy by the end of program implementation</p> <p>70% of Participants will distinguish asset-based and deficit-based approaches to categorizing a community and describe how each approach may protect or</p>	<p>General health survey</p> <p>SOC survey</p> <p>Post tests</p> <p>Group interview</p>

		<p>harm the health of the community by the end of program implementation</p> <p>100% of Participants will comprehend how upstream causes (e.g., social, economic, and political factors) can influence health by the end of program implementation</p> <p>100% of Participants will photograph, map or conduct inventories of resources (goods and services) and policies in their community. They will determine if those resources and policies protect or harm the health of the community during program implementation</p> <p>100% if Participants will understand their role in advocating for health improvements in their community by the end of program implementation</p> <p>100% of Participants will understand that they can help leverage assets and reduce/remove barriers to optimize the health of the community by the end of program implementation</p>	
	5. Increase cerebrovascular and cardiovascular health promoting activities among	70%+ of all participants will report an increase of participating in physical activity at least 3 times a week for minimum of 30 minutes or more within two weeks post program implementation	<p>Surveys</p> <p>Group interview</p>

	participants	<p>70%+ of all participants will report an increase in fruits and vegetable consumption by the end of program implementation</p> <p>70%+ of all participants will report a decrease in saturated fat consumptions by the end of program implementation</p> <p>70%+ of all participants will report a decrease in sodium and sugar consumption by the end of program implementation</p> <p>70%+ of all participants will report a decrease or moderation of alcohol consumption by the end of program implementation</p>	
	6. Increase commitment for policy and environmental changes within the church and community	<p>Increase church commitment to providing access to healthy foods and beverages to their congregants by the end of program implementation</p> <p>Increase and maintain collaboration with churches, county public health departments, HMA, HHM, county hospital on education and policy intervention programs to detect and control high blood pressure among African Americans in Riverside County during and post program implementation</p> <p>HMA, HHM and church congregants will make concerted efforts to assure</p>	<p>Stakeholder letters</p> <p>Group interviews</p> <p>Survey</p>

		that detection and follow-up services are available for controlling high blood pressure and cholesterol among church congregants and participants through collaborations throughout and post program implementation	
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